Приложение 4

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

Federal State Autonomous Educational Institution of Higher Education
«National Research Lobachevsky State University of Nizhny Novgorod»

Институт клинической медицины

УТВЕРЖДЕНО
решением Ученого совета ННГУ

протокол № 10 от 02.12.2024 г.

Working programme of the discipline

Pediatrics

Higher education level

Specialist degree

Area of study / speciality

31.05.01 - General Medicine

Focus /specialization of the study programme

General Medicine

Mode of study

full-time

Nizhny Novgorod

Year of commencement of studies 2025

1. Место дисциплины в структуре ОПОП

Дисциплина Б1.О.45 Педиатрия относится к обязательной части образовательной программы.

2. Планируемые результаты обучения по дисциплине, соотнесенные с планируемыми результатами освоения образовательной программы (компетенциями и индикаторами достижения компетенций)

Формируемые компетенции (код, содержание компетенции)	**Планируемые результаты обучения по дисциплине (модулю), в соответствии с индикатором достижения компетенции**		**Наименование оценочного средства**	
	Индикатор достижения компетенции (код, содержание индикатора)	**Результаты обучения по дисциплине**	**Для текущего контроля успеваемости**	**Для промежуточной аттестации**
УК-1: Способен осуществлять критический анализ проблемных ситуаций на основе системного подхода, вырабатывать стратегию действий	*УК-1.1: Анализирует задачу, выделяя ее базовые составляющие* *УК-1.2: Находит и критически анализирует необходимую информацию и критически рассматривает возможные варианты решения задачи.* *УК-1.3: Грамотно, логично, аргументированно формирует собственные суждения и оценки* *УК-1.4: Определяет и оценивает последствия возможных решений задачи.*	*УК-1.1:* *Анализировать задачу, выделяя ее базовые составляющие* *УК-1.2:* *Находить и критически анализировать необходимую информацию и критически рассматривать возможные варианты решения задачи.* *УК-1.3:* *Грамотно, логично, аргументированно формировать собственные суждения и оценки* *УК-1.4:* *Определять и оценивать последствия возможных решений задачи.*	*Доклад-презентация* *Кейс-задача*	*Экзамен:* *Контрольные вопросы* *Кейс-задача* *Тест* *Зачёт:* *Контрольные вопросы*
ПК-2: Готовность к распознаванию состояний, возникающих при внезапных острых заболеваниях, обострении хронических заболеваний, требующих оказания помощи в неотложной или экстренной форме и участию в оказании скорой	*ПК-2.1: Знать методы проведения неотложных мероприятий и показания для госпитализации больных; клинические проявления основных синдромов, требующих срочного медицинского вмешательства; принципы и методы оказания первой медицинской и при неотложных состояниях.* *ПК-2.2: Уметь выявлять*	*ПК-2.1:* *Знает методы проведения неотложных мероприятий и показания для госпитализации больных; клинические проявления основных синдромов, требующих срочного медицинского вмешательства; принципы и методы оказания первой медицинской и при неотложных состояниях.*	*Кейс-задача*	*Зачёт:* *Контрольные вопросы* *Экзамен:* *Контрольные вопросы* *Тест* *Кейс-задача*

медицинской помощи при этих состояниях, требующих срочного медицинского вмешательства, в том числе при чрезвычайных ситуациях, и участие в медицинской эвакуации	*жизнеопасные нарушения и оказывать при неотложных состояниях первую помощь, пострадавшим в очагах поражения в чрезвычайных ситуациях* *ПК-2.3: Владеть алгоритмом выполнения основных врачебных диагностических и лечебных мероприятий по оказанию первой врачебной помощи при неотложных и угрожающих жизни состояниях*	*ПК-2.2:* *Умеет выявлять жизнеопасные нарушения и оказывать при неотложных состояниях первую помощь, пострадавшим в очагах поражения в чрезвычайных ситуациях* *ПК-2.3:* *Владеет алгоритмом выполнения основных врачебных диагностических и лечебных мероприятий по оказанию первой врачебной помощи при неотложных и угрожающих жизни состояниях*		
ПК-3: Готовность 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, проведение дифференциальной диагностики*	*ПК-3.1: Знать методы сбора анамнеза, жалоб, осмотра больного с терапевтической патологией для распознавания заболеваний, этиологию, патогенез, и клинику наиболее часто встречающихся заболеваний внутренних органов; современную классификацию, принципы и особенности основных методов клинических, лабораторных и инструментальных методов обследования, их диагностическое значение* *ПК-3.2: Уметь получить информацию о заболевании, интерпретировать жалобы, анамнез заболевания и жизни, данные, применить объективные методы обследования , выявить общие и специфические признаки заболевания; построить план обследования больного с учетом стандартов и интерпретировать дополнительные методы обследования (лабораторно-*	*ПК-3.1:* *Знает методы сбора анамнеза, жалоб, осмотра больного с терапевтической патологией для распознавания заболеваний, этиологию, патогенез, и клинику наиболее часто встречающихся заболеваний внутренних органов; современную классификацию, принципы и особенности основных методов клинических, лабораторных и инструментальных методов обследования, их диагностическое значение* *ПК-3.2:* *Умеет получить информацию о заболевании, интерпретировать жалобы, анамнез заболевания и жизни, данные, применить объективные методы обследования , выявить общие и специфические признаки заболевания; построить план обследования больного с учетом стандартов и интерпретировать дополнительные методы обследования (лабораторно-*	*Практическое задание*	*Зачёт:* *Кейс-задача* *Экзамен:* *Кейс-задача*

	инструментальные) с учетом нормы *ПК-3.3: Владеть методами сбора анамнеза, жалоб больного с терапевтической патологией; навыком составления плана дополнительного обследования больного; интерпретацией результатов лабораторных и инструментальных исследований и проведения дифференциальной диагностики*	*инструментальные) с учетом нормы* *ПК-3.3:* *Владеет методами сбора анамнеза, жалоб больного с терапевтической патологией; навыком составления плана дополнительного обследования больного; интерпретацией результатов лабораторных и инструментальных исследований и проведения дифференциальной диагностики*		

3. Структура и содержание дисциплины

3.1 Трудоемкость дисциплины

	очная
Общая трудоемкость, з.е.	**8**
Часов по учебному плану	**288**
в том числе	
аудиторные занятия (контактная работа):	
- занятия лекционного типа	**30**
- занятия семинарского типа (практические занятия / лабораторные работы)	**112**
- КСР	**3**
самостоятельная работа	**107**
Промежуточная аттестация	**36** **Экзамен, Зачёт**

3.2. Содержание дисциплины

(структурированное по темам (разделам) с указанием отведенного на них количества академических часов и виды учебных занятий)

Наименование разделов и тем дисциплины	Всего (часы)	в том числе			
		Контактная работа (работа во взаимодействии с преподавателем), часы из них			Самостоятельная работа обучающегося, часы
		Занятия лекционного типа	Занятия семинарского типа (практические занятия/лабораторные	Всего	

			работы), часы		
	ооо	ооо	ооо	ооо	ооо
General issues of pediatrics. Propaedeutics. Physical development	11	1	5	6	5
Nutrition of a healthy child	17	2	10	12	5
Neonatology	25	3	15	18	7
Diseases of the digestive system in children	27	4	16	20	7
Pediatric pulmonology	28	4	18	22	6
Pediatric cardilogy	20	2	12	14	6
Midterm attestation - credit	1		1	1	
Hematology of childhood	27	4	13	17	10
Endocrine diseases in childhood	26	4	12	16	10
Pediatric nephrology	28	4	14	18	10
Allergic diseases in children	24	2	12	14	10
Vaccination	13		6	6	7
Exam	2		2	2	
Аттестация	36				
КСР	3			3	
Итого	288	30	136	169	83

Contents of sections and topics of the discipline

Periods of childhood.
Features of collecting medical history in childhood.
The main indicators of physical development of children. Assesment of the physical development
Neuropsychic development in early childhood. Baby milestones

Nutrition of a healthy child
Feeding a child in the first year of life. The benefits of breastfeeding. Principles of mixed and artificial feeding.
Rules for the introduction of complementary foods. Nutrition features of older children.
Prevention of vitamin D deficiency. Rickets.

Neonatology
Features of the newborn period. Transitional conditions of newborns.
Basic medical care for a newborn in the delivery room
Principles of neonatal resuscitation. Principles of nursing premature babies. Caring for a healthy newborn. Care of the umbilical region. Omphalite, a fungal infection of the navel.
Delayed fetal development. Morpho-functional criteria of a full-term, premature, postponed, immature child. Perinatal damage to the central nervous system. Intrauterine infections, sepsis, localized purulent-septic diseases. Necrotizing enterocolitis. Anemia of newborns and premature babies. Polycythemia. Neonatal hyperbilirubinemia: differential diagnosis. Management tactics of full-term and premature newborns with indirect hyperbilirubinemia. Hemolytic disease of newborns. Hemorrhagic disease of the newborn. Respiratory disorders (respiratory distress syndrome, asphyxia, bronchopulmonary dysplasia).

Etiology of diseases, classification, pathogenesis, clinical picture, diagnosis, differential diagnosis, treatment, prognosis.

Diseases of the digestive system in children
Anatomical and physiological features of the digestive system in children.
Diseases of the upper gastrointestinal tract: gastroesophageal reflux disease, acute and chronic gastritis, duodenitis, peptic ulcer of the stomach and duodenum.
Diseases of the small intestine: celiac disease, disaccharidase deficiency.
Diseases of the colon. Crohn's disease.
Functional disorders of the gastrointestinal tract in children: infant regurgitation, infant colic, cyclic vomiting syndrome, functional dyspepsia, irritable bowel syndrome, constipation. Diseases of the biliary tract: dysfunctional disorders of the biliary tract, acute and chronic cholecystitis.
Liver diseases: chronic hepatitis, cirrhosis of the liver.
Diseases of the pancreas: acute and chronic pancreatitis.

Etiology, pathogenesis, features of the clinical picture and course in children, clinical diagnosis, laboratory and instrumental diagnostics, differential diagnosis, treatment, prevention, prognosis.

Pediatric pulmonology
Anatomical and physiological features of respiratory organs in children.
Acute and chronic respiratory diseases: laryngitis, bronchitis, pneumonia. Cystic fibrosis.
Etiology, pathogenesis, features of the clinical picture and course in children, clinical diagnosis, laboratory and instrumental diagnostics, differential diagnosis, treatment, prevention, prognosis.

Cardiology of childhood
Anatomical and physiological features of the cardiovascular system in children.
Congenital heart and main vessel defects Cyanotic and cyanotic heart defects. Minor anomalies of heart development.
Non-rheumatic carditis. Juvenile arterial hypertension. Syncopated states.

Etiology, pathogenesis, classification, features of the clinical picture and course in children, clinical diagnosis, laboratory and instrumental diagnostics, differential diagnosis, treatment, prevention, prognosis

Hematology of childhood
Standards of laboratory parameters of peripheral blood in children of different ages.
Anemia, thrombocytopenia, coagulopathy (hemophilia, etc.)

Etiology, pathogenesis, clinical features and course in children, clinical diagnosis, laboratory and instrumental diagnosis, differential diagnosis, treatment, prevention, prognosis.

Endocrine diseases in childhood
Anatomical and physiological features of the endocrine system in children.
Fatness. Sexual development of children.
Endocrinological pathology in children (diabetes mellitus, hyperthyroidism, hypothyroidism, adrenogenital syndrome, congenital dysfunction of the adrenal cortex).

Etiology, epidemiology, pathogenesis, classification, clinical picture, features of the course in children, complications, diagnosis, methods of early detection, differential diagnosis, treatment, prevention, prognosis. The importance of hormonal profile research for the diagnosis of growth pathology variants.

Childhood nephrology
Urinary tract infections, glomerulopathy, acute and chronic renal failure.
Hemolytic-uremic syndrome.

Etiology, epidemiology, pathogenesis, classification, clinical picture, features of the course in children, complications, diagnosis, methods of early onset, differential diagnosis, treatment, prevention, prognosis.

Allergic diseases in children
Allergic rhinitis.
Bronchial asthma.
Gastrointestinal manifestations of food allergies.
Atopic dermatitis.
Urticaria, angioedema, anaphylaxis.

Etiology, pathogenesis, clinical picture and course in children of different ages, diagnosis, differential diagnosis, features of the course in children, treatment, prevention, prognosis.

Vaccination
General issues of immunoprophylaxis. Classification of vaccines. Methods and techniques of vaccine administration. Mechanisms of action of vaccines. Methods of vaccine production. The composition of vaccines. Indications and contraindications for vaccination. The national calendar of preventive vaccinations in Russia.

4. Учебно-методическое обеспечение самостоятельной работы обучающихся

Самостоятельная работа обучающихся включает в себя подготовку к контрольным вопросам и заданиям для текущего контроля и промежуточной аттестации по итогам освоения дисциплины приведенным в п. 5.

Для обеспечения самостоятельной работы обучающихся используются:
Электронные курсы, созданные в системе электронного обучения ННГУ:

Педиатрия, https://e-learning.unn.ru/course/view.php?id=11707.

5. Assessment tools for ongoing monitoring of learning progress and interim certification in the discipline (module)

5.1 Model assignments required for assessment of learning outcomes during the ongoing monitoring of learning progress with the criteria for their assessment:

5.1.1 Model assignments (assessment tool - Report-presentation) to assess the development of the competency УК-1:

- Современные методы диагностики наследственных болезней.
- Функции печени, значение для поддержания гомеостаза, роль нарушений в патогенезе ра зличных заболеваний у детей.
- Энурез
- Апластическая анемия. Особенности диагностики в зависимости от основного этиологического фактора.
- Лечебные смеси для вскармливания детей первого года жизни, показания к назначению.
- Специализированные продукты питания для женщин вегетарианок и веганов в период беременности и кормления грудью

Assessment criteria (assessment tool — Report-presentation)

Grade	Assessment criteria
pass	The student has met the minimum standards of achievement for the course.
fail	The student has not met the minimum standards of achievement for the course. Is given if the standard has not been met and the basics have not been understood.

5.1.2 Model assignments (assessment tool - Case-task) to assess the development of the competency УК-1:

Case 1 **

A boy, 7 years old.
Complaints of paroxysmal cough, wheezing.
A boy from the first normal pregnancy, an urgent
delivery. Birth weight 3200 g, length 52 cm. The period of
newness without features. On artificial feeding since birth.
When eating raspberries, chocolate, eggs, rashes appear on the skin.
Family history: the child's mother has atopic dermatitis. At the age of 3 and 4, in May, the boy had suffocation attacks outside the city, which
they were treated on their own when moving to the city. The real attack occurred after eating raspberries. The emergency room doctor carried out emergency measures. The attack was stopped. The asset was transferred to the local doctor.
On examination: the condition is of moderate severity. The skin
is pale, blue under the eyes. There is dryness, peeling, and scratching on the cheeks, behind the ears, and in the natural
folds of the arms and legs. The tongue is "
geographical", jams in the corners of the mouth. Breathing is whistling, audible at
a distance. Exhalation is prolonged. BH — 38 in 1 min. Over the lungs percussion
a box—tinged sound, auscultation - a mass of dry wheezing
over the entire surface of the lungs. The boundaries of the heart are within the normal range. The tones are muted. Heart rate 70 beats/min.
The belly is soft, painless. Liver +2 cm from under the edge of the costal arch. The spleen is not palpable. The chair is daily, decorated.
Complete blood count: er. — $4.0x10^{12}$/L, Hb — 117 g/L, Le—
$5.8x10^{9}$/L, e -15%, n/I — 1%, s — 47%, L — 29%, m — 8%, ESR — 3 mm/
an hour.
General urinalysis: relative density — 1016, no mucus, Leucocytes 3-4, Erythrocytes 0.
Chest X-ray: increased pulmonary fields transparency, increased vascular pattern in the root zones, no focal shadows.
Task
1. Make a diagnosis.
2. Urgent measures necessary in this case.
3. Prescribe the treatment needed in the attack-free period.
4. What additional studies will confirm this form of the disease?
5. Which specialists should be shown the child?
The answer to case 1

1. Atopic bronchial asthma, persistent, moderate
to severe, attack period. Gastrointestinal food
allergy. Atopic dermatitis, exacerbation.
2. Inhalation therapy: inhalation of bronchospasmolytics,
corticosteroids, mucolytics, seizure relief with an assessment
of the patient's condition 20 minutes after the
inhalation. If inhalation is ineffective
, infusion therapy (euphyllin, prednisone) is used.
3. Basic therapy is inhaled corticosteroids as
monotherapy or in combination with antileukotrienes
((montelukast, singular, montelar). Elimination diet.
4. During the attack period, spirography is performed, during the inter—
attack period, peak flowmetry.
5. Consultation with a dermatologist, gastroenterologist.

Case 2*

Girl, 11 years old. Complaints of fever in the evening up to 38.5 ° C,
wet cough, general weakness.
She got sick 2 weeks ago, when she had sore throat, mucous discharge
from the nose, and a temperature of 37.5 °C in the evenings for two days.
I didn't go to the doctor, I took paracetamol, septolete, lazolvan, nasal drops. The condition improved, the sore throat disappeared, and moderate general weakness persisted. The deterioration occurred 2 days ago, when the temperature rose to 38.5 °C in the evening.,
weakness increased sharply, a cough appeared with the release of a small amount of yellowish-white sputum, after taking paracetamol, the temperature dropped to 37.5 ° C for a short time.
Objectively: the condition is of moderate severity. Sluggish. Appetite is reduced.
The pharynx is hyperemic. Sore throat. Mucous discharge from the nose. The skin
is pale. Breathing is hard in the lungs. Percussion — blunting
of the pulmonary sound on the right in the scapular region. Auscultation —
weakening of breathing in the scapular area on the right. The heart tones
are rhythmic. The abdomen is soft, painless. Liver, spleen are
not enlarged. The stool is daily, well-formed, and the diuresis is normal.
CBC: er. — 4.5 x 10^{12}/l, Hb — 115 g/L, hematocrit — 0.32, Le- 6.9 x 10^{9}/L, b - 0%, e - 2%, p — 2%, s — 56%, L — 35%, m — 5%, the ESR is 37 mm/h.
General urinalysis: the relative density of urine is 1020, the color is yellow, the reaction is acidic, there is no protein, sugar is not detected, leukocytes are 2-4 in subcutaneous tissue, erythrocytes are 0 in subcutaneous tissue, crystals are not present.
ECG: sinus rhythm, 93 beats per 1 min. Diffuse dystrophic changes in the myocardium.
Chest X-ray: infiltration site in S5 on the right. The sinuses are free.
Task
1. Make and justify the diagnosis.
2. Make a differential diagnosis.
3. Additional examination plan.
4. Principles of treatment.
The answer to case 2
1. Community-acquired pneumonia, right-sided, segmental (S5), moderate form.
The onset of the disease is acute, with pronounced catarrhal symptoms, hyperthermia, pneumonic toxicosis, dry cough with scanty yellowish-white sputum, moderate inflammatory changes in the general blood count, increased ESR.
2 Acute bronchitis

3. Sputum culture, repeated ECG.
4. Antibacterial therapy — beta-lactam antibacterial drugs, inhalation of mucolytics, infusion therapy.

Case 3*

A boy, 3 years old. Complaints of fever up to 38.8 ° C during the day, decreases against the background of taking paracetamol, cough is dry. From anamnesis: 2 weeks ago I had acute respiratory viral infections. They did not go to the doctor, they were treated with home remedies. Cough persists for 2 weeks. On inspection, the temperature is 38.0 °C. Active. The pharynx is hyperemic. Nasal breathing is difficult, mucosal discharge. The cough is unproductive and frequent. The respiratory rate is 42'. The skin is pale. The participation of auxiliary muscles in the act of breathing is noted. Auscultation - hard breathing. Dry wheezing sounds are heard. Percussion is a boxed shade of percussion sound. The heart tones are rhythmic. The belly is soft, painless. The liver and spleen are not enlarged. The stool is daily, well-formed, and the diuresis is normal. General blood test: Er - 4.5 x 1012/L, Hb — 120 g/L, Le - 14.2 x 109/L, e - 9% c - 37%, P - 10%, L - 49%, m - 5%, ESR — 18 mm/h.

Task 1. Make a preliminary diagnosis. 2. Determine the further scope of diagnostic measures. 3. Prescribe treatment according to the suspected pathogen. 4. Determine the scope of rehabilitation measures.

The answer to case 3

1. Acute obstructive bronchitis.
2. Chest X-ray, ELISA for Mycoplasma
pneumoniae, Chlamydia pneumoniae, general IgE, specific IgE antibodies.
3. Antibacterial therapy: macrolides, inhalations of bronchospasmolytics, corticosteroids, mucolytics before bronchospasm relief.
4. Massage, physical therapy, adaptogens. Hypoallergenic lifestyle, diet. Rehabilitation of foci of chronic infection.

Case 4**

A 4-year-old child developed abdominal pain, nausea, and multiple loose stools,
with a temperature of up to 37.5 °C. The child's condition during the examination
is satisfactory, and his well-being does not suffer. The skin is moist,
of normal color, and salivation is sufficient. The tongue has
a whitish coating at the root. The mucous membrane of the oropharynx is moderately
hyperemic. The lymph nodes are not enlarged. Pathology of the lungs and cardiovascular system was not detected. The abdomen is moderately swollen, and rumbles on palpation. The liver is at the edge of the costal arch. The stool was examined by a doctor — liquid, light yellow, with white flakes.

task

1. Make a diagnosis
2. What studies can be recommended in outpatient settings?
3. Prescribe a treatment.
5. What possible complications can be foreseen?
6. Medical examination of the patient after the disease.

The answer to case 4

1. Infectious gastroenteritis, mild severity (probably of viral etiology).
2. Complete blood count, urinalysis. The coprogram. Three-time bacteriological analysis of feces for intestinal group. Stool ELISA for rotavirus antigen or express strip. 3. Take the epid. Please tell the parents the hygiene rules that must be followed when caring for a sick young child. 4. Mechanically and chemically sparing diet, exclusion of milk ; oral rehydration with hypoosmolar solutions (Humana-electrolyte, gastrolite, hydrolite) 1 liter of boiled water – 1 tsp salt without a slide + 6 tsp sugar without a slide For children under 5 years of age, half as much salt and sugar per the same volume of water. Solder off 2-3 tablespoons every 5 minutes at the rate of: The 1st stage is primary rehydration - replenishment of losses that occurred before seeking medical help, and is calculated for 6 hours. The total amount of liquid is 50-80 ml / kg for 6 hours 2-3 tbsp.l.every 5 minutes.

After vomiting, do not give 1 hour The 2nd stage is supportive rehydration, which is the replenishment of current fluid losses during acute respiratory failure. 80-100 ml / kg of liquid is prescribed per day. The duration of the second stage of oral rehydration continues until recovery or indications for parenteral correction of dehydration appear. It should be borne in mind that the correction of dehydration is impossible without the use of salt-free solutions, among which preference should be given to drinking water (not mineral!), it is possible to use pectin-containing decoctions (apple compote without sugar, carrot-rice broth). The ratio of glucose-salt solutions to drinking water should be 1:1 for watery diarrhea, 2:1 for severe vomiting, 1:2 for invasive diarrhea. Smecta or other enterosorbent, enzymes, probiotics 5. Dehydration, development of intestinal dysbiosis, in rare cases intestinal invagination. The prognosis is favorable. 6. Follow-up within one month after clinical recovery: dairy-free, sparing diet, enzymes, probiotics.

Case 5 ***

A girl, 3 months old. She was born on time, on natural feeding.
Mental and physical development correspond to age.
The child's father has had a cough in the last two weeks. According to the mother,
at a normal temperature, the child had a cough, which
worsened in the following days. A week later, the child was
hospitalized according to the severity of the condition with a diagnosis of "acute respiratory viral infections, pneumonia".
Upon admission: the condition is of moderate severity. The girl is pale.
Cough is paroxysmal, accompanied by cyanosis of the face, sometimes
with vomiting, discharge of thick, viscous sputum. It's hard in the lungs
breathing, wired wheezing. Heart tones are loud, tachycardia.
According to the internal organs, there are no special features.
At the end of the second week of the disease, the condition became severe.
His face was puffy, and cyanosis of the nasolabial triangle persisted
constantly. The cough worsened, became paroxysmal to 20-30
once a day with vomiting. Periodically, the child had
respiratory arrest, during which cyanosis appeared,
convulsions were noted several times. Then the temperature rose to 38.5 °C,
moist, bubbly wheezes began to be heard in the lungs, and
constant shortness of breath with retraction of the yielding places of the chest.
Heart tones are muted, heart rate is up to 160 beats/min. The child became
sluggish, restless at times.
Chest X-ray: pulmonary fields of increased
pneumatization, a large number of small focal shadows, especially in the basal and lower regions.
Total blood count: erythrocytes — 3.8 $x10^{12}$/l, hemoglobin —
108 g/l, leukocytes — 18.2 $x10^{9}$/l, color - 0.87, e — 5%, n/I — 5%,
s/I — 19%, L — 61%, m — 10%, The ESR is 11 mm/hour.
Task
1. Make a clinical diagnosis.
2. What is the suspected source of the disease?
3. What laboratory tests are needed to clarify the etiology of the disease?
4. Are there any complications of the disease in the child?
5. Evaluate the results of the peripheral blood test.
6. In which department should the patient be treated?
7. Prescribe a treatment.

The answer to case 5

1. Whooping cough, typical, severe form. Multiple atelectasis.
2. The source of infection is the child's father.

3. PCR and ELISA diagnostics for whooping cough. Bacteriological
examination by the method of cough plates.
4. No.
5. A complete blood count is typical for whooping cough.
6. Observation and treatment in the Intensive Care Unit.
7. Medicines: antibiotics (macrolides), inhalation with berodual, lazolvan.
8. Immunization with vaccines DPT, infanrix, pentaxime, tetraxime.

Case 6 ***
A 3-year-old boy became acutely ill. Within a few hours, the body temperature reached 40 ° C, there was difficulty breathing, sore throat. On examination, the child's condition is severe, the child is restless, the voice has not changed, swallowing any food, even saliva, is difficult and painful. Breathing by his open mouth, excessive salivation, inspiratory shortness of breath at rest with retraction of the supraclavicular pits, and increased shortness of breath when trying to put him to bed. The skin is pale. When examining the pharynx bright diffuse hyperemia. The submandibular lymph nodes are enlarged,
not soldered, and the skin above them is unchanged. Breathing is hard in the lungs,
it is carried out in all departments, there are no wheezes. The respiratory rate is 60 per minute.
The heart tones are loud, the rhythm is correct, the heart rate is 160 beats/min.
Task
1. Make a clinical diagnosis.
2. What causes the severity of the disease?
3. What is the algorithm of emergency care?
4. Features of transportation to the hospital.
5. What is the prevention of this disease?
The answer to case 6
1. Epiglottitis, severe form.
2. The syndrome of infectious toxicosis, a violation of the patency
of the respiratory tract due to an increase in the epiglottis due to inflammation determine the severity of the condition.
3. It is necessary to avoid or postpone activities that cause anxiety to the child (venipuncture, lying on his back, etc.), which can lead to sudden respiratory arrest!
At the prehospital stage, you should not try to examine the larynx! Give antipyretics. Parenterally administered inhibitor-protected aminopenicillins, cephalosporins of the third generation. Humidified oxygen is supplied. The child should be under the supervision of a doctor who has the skills
of tracheotomy, conicotomy and intubation.
4. Transportation in a sitting position.
5. Immunization with Act Hib, Hiberix, Pentaxime, Infanrix-hexa vaccines is the prevention of infection caused by hemophilic bacillus.

Case 7***
The child is 3 months old, sick for the second day: difficulty in nasal
breathing, excessive mucous discharge from the nose, rare dry
cough, temperature 37.5 °C. From the third day of the illness, the condition worsened, the cough became obsessive, shortness of breath appeared and quickly
increased to 80 in 1 minute, the temperature was 37.3 °C. The child's mother
went to an ambulance.
Upon examination of the child by the SMP doctor, the condition was assessed as severe.
The skin, mucous membranes of the lips and oral cavity are cyanotic.
Breathing is noisy, "puffing", shallow, with difficulty
exhalation and participation of auxiliary muscles in the act of breathing,

with inflating of the wings of the nose, retraction of the supraclavicular pits and interstitial spaces. Well-being suffers to a lesser extent.
The chest is swollen, above the lungs there is a boxy tinge of percussive sound, the boundaries of cardiac dullness are reduced, the upper boundaries of the liver and spleen are shifted down by one intercostal space.
During auscultation, breathing is harsh, exhalation is sharply prolonged, and on inhalation and exhalation, a mass of finely bubbly and crepitating wheezes is heard from both sides from the front and back. Heart tones are sonorous, frequency heart rate 172', I-tone accent over the pulmonary artery. The boundaries of the heart correspond to age. Other organs and systems during physical examination without special features.
Task
1. Make a preliminary diagnosis.
2. What syndrome causes the severity of the condition?
3. Determine the indications for hospitalization.
4. What additional research methods should be recommended?
5. Prescribe a treatment.
6. What is the prevention of the disease?
The answer to case 7
1. Bronchiolitis, severe form. Respiratory failure 2.
2. Bronchial obstruction syndrome.
3. Hospitalization is indicated due to the severe condition of the patient and the presence of bronchial obstruction.
4. Pulse oximetry, general blood analysis, chest X-ray.
5. Oxygen therapy through nasal catheters or head packs, moistening, hydration, superficial nasal aspiration, spraying of 3% hypertonic solution through a nebulizer, berodual - 1 drop / kg, in the absence of the effect of berodual inhalation, stop.
6. Breast-feeding, exclusion of secondhand smoke, disinfection of hands, palivizumab (according to indications).

Case 8***
A girl, 11 years old, complains of dull, aching abdominal pain that occurs 30-45 minutes after eating, as well as weakness, fatigue, and frequent headaches. The above complaints first appeared 6 months ago, but no examination or treatment was carried out.
A child from the first, normal pregnancy, an urgent delivery. Since the age of 10, he has been observed by a neurologist for vegetative-vascular dystonia. His mother is 40 years old and suffers from duodenal ulcer; his father is 42 years old and has chronic gastroduodenitis.
Examination: The skin is pale, with moderate humidity. The abdomen is not enlarged. With palpation, tension and pain is noted in the right hypochondrium, in the epigastrium. The liver protrudes 1.5 cm from under the edge of the costal arch, the edge of the liver is soft, elastic, and painless. Ortner's symptom (+).
From the side of the lungs and heart - without pathology. The stool is daily, decorated, sometimes lightened.
General blood test: er — 4.6x1012/l, Hb — 130 g/l, color - 0.93, leuc. — 7.0x109/l, e — 2%, n/I — 2%, s/I — 66%, L — 25%, m — 5%, ESR is 7 mm/hour.
General urinalysis: color is light yellow, transparent, relative density of urine is 1020, protein is not present, sugar is not present,

leuc. — 1-2 v /w, er. — 0-1 v / w, mucus is a little, there are no salts , no bacteria.
Coprogram: brown, pH — 7.3,
muscle fibers — in small amounts— intracellular starch -
a little, iodophilic flora — a small amount, vegetable fiber — a moderate amount,
mucus — a little, white blood cells –1-2 in the body.
Urine amylase 32 units.
Ultrasound of the abdominal organs: liver — smooth contours, parens-
The chemistry is homogeneous, the echogenicity is enhanced, the vascular network is not expanded, the portal vein is not changed. Gallbladder — 85x37 mm
(the norm is 75x30 mm), the walls are not thickened. Holedoch — up to 3.5 mm
(the norm is 4 mm), the walls are not thickened. After a choleretic breakfast, the gallbladder shrank by 10%.
Task
1. Formulate a diagnosis.
2. Name the aggravating factors of the disease.
3. Prescribe treatment for this child.
4. Tactics of patient monitoring after discharge from the hospital.
The answer to case 8
1. Gall bladder dysfunction of the hypotonic-hypokinetic type.
2. Vegetative-vascular dystonia.
3. Treatment. Therapeutic nutrition is to prescribe foods
with moderate choleretic effects: butter and vegetable oil, cream, sour cream, eggs, vegetable dishes from beets, pumpkins, zucchini, cauliflower, carrots; fruits
rich in dietary fiber (dried apricots, strawberries, raspberries, dried rose hips, etc.); black bread, oatmeal, wheat bran.
Medications: prokinetics (motilium) — 2.5 ml per 10 kg of body weight 3 times a day before meals for 10-15 days for 2-3 months; choleretic drugs (optional):
allohol 1 tablet 3-4 times a day with meals; hofitol
1-2 tablets 3 times a day before meals; flamin 1 tablet 3 times a day before meals; cholenzyme 1 tablet 1-3 times a day after meals; physiotherapy: ozokerite and paraffin applications, electrophoresis with magnesia, sorbitol.
4. During the rehabilitation period, decoctions of choleretic herbs for 2 weeks-
whether quarterly (infusion of oregano herb, decoction of corn
kernels, infusion of rose hips, chamomile 1/4—1/2 cup 3 times
a day for 30 minutes before eating). Mineral water: "Essentuki 4", "Smirnovskaya", "Slavyanovskaya" -3 ml/kg in warm form. In most cases, therapy is performed on an outpatient basis. The best option is spa treatment.

Case 9 **
Girl, 5 years old, constipation is noted from the first year of life, during the last year, stool occurs after 4-5 days, mainly after a cleansing enema, self-defecation is rare, difficult, incomplete. For 6 months encoprese is observed.
The child was full-term, the second in the family, artificial feeding from 2.5 months, was observed by a neurologist with a diagnosis of increased neuro-reflex excitability syndrome.
At the age of 3, she suffered an intestinal infection of unknown etiology.
The mother is 38 years old and suffers from constipation. Father is 40 years old, healthy; the brother is 13 years old, healthy.
Examination: weight 16 kg, height 105 cm, pale pink skin, blue under the eyes, swollen abdomen, painful along the colon, sigma dilated, thickened, fecal stones. Liver + 1.5 cm below the edge of the costal arch, slightly positive vesicular symptoms. There are no changes in other organs.
General blood test: er — 4.0x1012/L, Hb — 118 g/L, Le — 6.2 x 109/L, e — 4%, n/I — 3%, s/I — 47%, L — 40%, M — 6%, ESR — 11 mm/hour.

General urinalysis: color — light yellow, relative density of urine — 1018, protein — no, sugar — no, ep.pl. — a small amount, er. — no, mucus — a little.
Coprogram: dark brown color, well—formed; muscle fibers — in small quantities; intracellular and extracellular starch — a lot, iodophilic flora — a significant amount, indigestible vegetable fiber — a little, mucus - a lot, leuc. — 1-2 per day.
Irrigography: the colon is hypotonic, the sigmoid is significantly elongated and dilated. The rectum is wide in diameter, hypotonic, and on examination, a small portion of barium is excreted from the anus. Emptying from the intestine is incomplete, the pattern of the colon mucosa is rearranged, smoothed, and gaustation in the distal the colon is poorly expressed.
Task
1. What kind of pathology can you think about?
2. Encopresis primary or secondary?
3. Treatment plan.
The answer to case 9
1. Dolichosigma. Chronic colitis in the acute stage. Encopresis.
2. Secondary encopresis.
3. Treatment plan: repeated cleansing enemas with salt water (1 tablespoon of table salt per 1 liter of water at room temperature, 200-500 ml of solution should be administered in the enema) until complete emptying of the colon within a few days (before relief of endocopresis). Microclysms "Microlax" allowed from birth, but it is an emergency medicine, not long-term use, has an irritating effect on the intestinal mucosa).
Then treatment with lactulose or macrogol preparations.
Phase 1 – increasing the dose.
The child is given lactulose or macrogol once a day in an increasing dose until mild diarrhea appears (type 5-6 on the Bristol Stool Scale).
Phase 2.
The child takes a laxative for several months in a dose, maintaining a soft stool. During this time, the rectum, which is no longer stretched by dense feces, becomes toned, the child weans off the association defecation = pain, and during this time the child adapts to the defecation regime: every time after breakfast or after dinner.
Phase 3 – gradual dose reduction.
The drinking regime is 1000 ml per day. To introduce dietary fiber into the diet (gray cereals, stewed vegetables, dried apricots, prunes, in-fat). Abdominal massage, physical therapy.

Case 10 ***
A boy, 7 years old, became acutely ill tonight.
The temperature rose to 38 °C, abdominal pain appeared. I had vomiting once, loose stools with mucus. The ambulance took him to the infectious diseases department with suspected dysentery. On examination, the patient's forced position on his right side with his legs pulled up to his stomach, and a pained expression on his face. The skin is pale, the tongue is dry, covered with a thick coating, slight pharyngeal hyperemia. In the lungs, breathing is vesicular, and the heart tones are distinct.
Palpation of the abdomen determines soreness and muscle tension. abdominal wall, a positive symptom of Shchetkin-Blumberg.
The stool in the emergency room is liquid, with an admixture of mucus.
task
1. Make a preliminary diagnosis.

2. Your medical tactics.
The answer to case 10
1. Acute appendicitis.
2. Immediate admission to the surgical department.

Case 11**
At a preventive appointment, a general practitioner examines a boy at the age of 5 months. There are no complaints. It is known from the medical history that the child is from the third pregnancy, the second birth (1 medical report). The pregnancy took place in the winter and spring period, and in the second trimester the woman suffered from acute respiratory viral infections. Throughout pregnancy, there was a threat of miscarriage, chronic
fetoplacental insufficiency. Childbirth without special features.
Birth weight 3300 g, length 53 cm, Apgar score 6/7 points.
The baby is attached to the breast 12 hours after birth. Discharged
He was discharged from the hospital on the seventh day with a diagnosis of chronic
intrauterine hypoxia. Up to 3 months on natural
feeding, then it was switched to artificial, kefir was used as a milk
mixture. The child is registered with a
neuropathologist with a diagnosis of "perinatal CNS lesion of
posthypoxic origin, hypertension syndrome." From the age of 3 months
, juice and fruit puree have been introduced into the diet. Currently, the child receives kefir from the dairy kitchen.
Objectively: the condition is satisfactory. Actual weight
7000 g, length 63 cm. Neuropsychiatric development: the child is over-
turns only from the back to the stomach. The emotional reaction
and the development of the auditory and visual analyzers correspond
to age. The skin is pale and clear. The subcutaneous fat layer is well developed
and evenly distributed. Peripheral
lymph nodes are not enlarged. The turgor of the soft tissues is flabby. The head
is irregularly shaped: flattening of the occipital region, parietal
tubercles, large fontanel 1.5 x 1.5 cm, the edges are pliable. The chest
is cylindrical in shape, and rib beads are palpated. The shape
of the upper and lower limbs, wrist and ankle
the joints are not changed. Muscular hypotension is noted. Breathing
is puerile. The heart tones are clear, the rhythm is correct,
and the noise is functional. The abdomen is oval in shape, moderately swollen,
and painful on palpation. The liver protrudes 1.0 cm from under the edge of the right costal
arch, elastic. The spleen is not palpable. The stool is homogeneous, without
pathological impurities, 2 times a day. Diuresis is age-appropriate.
Complete blood count: er. - 3.9 x 1012/l, Hb - 125 g/l, MSN 26, Le 8,7 x 109/l, e 2%, N 1%, C 38%, L 55 5, m 4%, ESR — 4 mm/hour.
General urinalysis: relative urine density — 1012,
protein is not, sugar is not, lake. — 0-1 in n/a, er. — 0-1 in n/a, epit.
flat. — 0-1 in n/a.
Coprogram: fatty acid — +, lake. — 0-1 in n/a, epit. — 0-1 in n/a.
Task
1.Make a diagnosis 2. What medical history data led to the development of
hypovitaminosis D? 3. Evaluate the data of the child's physical and neuropsychiatric
development. 4. Assign the optimal regime and individual nutrition to the child for one day.
5. In what dose should vitamin D be prescribed?

The answer to case11

1. The child should be monitored with a diagnosis of "rickets of the second grade, period of peak, subacute course; perinatal lesion Central nervous system of posthypoxic origin, hypertensive syndrome".
2. The following factors contributed to the development of rickets: pregnancy during the winter-spring season, which was unfavorable for the full-fledged micronutrient supply of the fetus (lack of sufficient sunlight, deficiency of vitamins in nutrition); burdened course of pregnancy in the mother, accompanied by impaired fetal nutrition; early transfer to artificial feeding; feeding from 3- x months with an unadapted fermented milk mixture.
3. Objectively: body length corresponds to age, normal weight for the specified height. In neuropsychiatric development, there is a delay in the formation of general movements: the child should already be trying to turn over from his stomach to his back, there are symptoms of damage to the musculoskeletal system.
4. 5 feedings every 4 hours
6.00 — adapted milk formula 200 ml;
10.0 — gluten-free porridge 150 ml + butter 3 g + milk mixture 50 ml
14.00 — apple sauce 50 g + adapted milk mixture 150 ml;
18.00 — vegetable puree (150 g) + vegetable oil.butter 3 g + milk mixture 50 ml
22.00 —adapted milk formula 200 ml;
It is necessary to cancel kefir and prescribe an adapted milk formula.
5. Vitamin D (Vigantol, AquaD3) — a daily dose of 2500 IU for 45 days.
Monitoring for possible overdose of cholecalciferol should be carried out by the level of calcium in the daily urine (no more than 2 mg / kg per day).

Case 12***

A boy from healthy parents was admitted to the clinic at the age of 1 month and 11 days.
Anamnesis data: Pregnancy 1, proceeded without complications. The birth is urgent, independent. Body weight at birth is 3550 g, body length is 52 cm. He took the breast well, sucked actively. In the 1st month of his life, he gained 700 g in weight.
At the age of 1 month and 7 days, profuse vomiting suddenly appeared, which was repeated daily 3-4 times a day. After 2 days, constipation and decreased urination appeared.
Objective examination data: the condition of the child upon admission to the clinic of moderate severity. Calm, sucking greedily. There is abundant vomiting from the fountain. The weight deficit is 16%. The skin is pale pink, dry. There is a decrease in the subcutaneous fat layer and tissue turgor. In the lungs, breathing is puerile, there is no wheezing. The breathing rate is 40 per minute. The tones of the heart are clear and loud. The heart rate is 140 per minute. The stomach is well-shaped. In the epigastric region, gastric peristalsis in the form of an hourglass is clearly visible. A thickened pylorus the size of a plum stone is palpated. The number of urinations is 7 times a day.
Biochemical blood test: serum protein – 75.2 g/l, blood pH - 7.60, VE - + 8.5 mEq/L, SB -31.2 mEq/L, pCO2 - 31 mmHg.
X-ray of the gastrointestinal tract with barium revealed an enlarged stomach and revealed a barium retention of more than 24 hours.
Task:
1. Make a diagnosis.
2. What are the symptoms characteristic of this disease?

3. Does the child need additional research methods to clarify the diagnosis?
4. Specify the treatment strategy.
5. How and with what to feed such a patient?
The answer to problem 12
1. Congenital pyloric stenosis.
The diagnosis is made on the basis of medical history data.:
- Profuse, repeated vomiting in a fountain at the age of 1 month. 7 days, with simultaneous absence of bowel movements, which may indicate a high intestinal obstruction. Before that, the child ate well, gained 700 g in weight.
Objective inspection data:
- Symptoms of hypotrophy and exsicosis: a 16% body weight deficit, a decrease in the thickness of the subcutaneous fat layer and tissue turgor, dry skin, thirst (sucks greedily).
- Segmental peristalsis of the stomach in the form of an hourglass is visible (a symptom characteristic of pyloric stenosis).
- A thickened pylorus the size of a plum stone is palpated (hypertrophy of the muscular layer of the pylorus).
Laboratory and instrumental research data:
- "Blood clot" syndrome - an increase in protein levels (associated with a decrease in BCC),
- Decompensated metabolic alkalosis (a characteristic change in blood glucose due to a large loss of gastric juice and acid bases with vomiting).
- An increase in the size of the stomach and retention of the barium mixture in the stomach for more than 24 hours (which is typical for pyloric stenosis). A barium retention of more than 8 hours may already indicate a high intestinal obstruction, possibly associated with a malformation of the pyloric part of the stomach.
2. The symptoms are listed in paragraph 1.
3. In this case, the diagnosis is clear and does not require additional examination, however, a child in need of surgical treatment is shown:
- A general blood test with hemosyndrome (platelets, clotting time, bleeding time).
- Biochemical blood test with mandatory determination of urea, electrolytes, protein.
- Chest X-ray (thymomegaly).
- neurosonography (ultrasound examination of the brain through a large fontanel), to exclude pathology associated with birth trauma.
- Electrocardiography.
- Esophagogastroduodenoscopy is possible if no radiopaque examination of the gastrointestinal tract has been performed.
4. Surgical treatment, Fred-Ramstedt pylorotomy with mandatory preoperative preparation (correction of water and electrolyte disorders).
5. Before surgery, fractional feeding with breast milk or an adapted mixture of 20-30 ml every 2 hours, the necessary energy and water needs are provided by infusion therapy, after surgery, feeding begins after 4 hours, 10 ml every 2 hours, daily the amount of milk in feeding is increased by 10 ml. Usually, the amount of nutrition is adjusted to the age norm in 10 days (with an uncomplicated course of the postoperative period).

Case 13**
A 13-year-old girl has been complaining of severe epigastric and pyloroduodenal pain for the last 10 days. The pain is paroxysmal, stabbing, radiating to the back, lower back and right shoulder. The pain occurs 1-2 hours after eating, sometimes hungry and at night, relief comes after eating. In the last 10 days, I have vomited twice without blood, which has brought relief. The chair is regular and decorated.
It is known that the girl does not eat regularly, often dry-boiled, allergic reactions to citrus fruits, chocolate, eggs. Heredity is burdened – my mother and grandmother have peptic ulcer of the duodenum. 2 weeks ago, the child had a conflict at school.
Objective research data on admission.

Examination: height 160 cm, weight 45 kg. The skin is pale and clear. The language is "geographical", overlaid with a grayish-white coating. The heart tones are clear, loud, and the pulse rate is 92 per minute. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 24 per minute. With deep palpation of the abdomen, moderate muscular defiance, pain in the epigastrium and pyloroduodenal region, Desjardins and Mayo-Robson points. The chair is not changed.
Sexual formula: P3, Ma3, Ah3, Me0.
EGDS - the mucous membrane of the esophagus is pink, the cardia is closed. There is cloudy mucus in the stomach; the mucosa of the antrum of the stomach is nesting focally hyperemic, edematous, and flat protrusions on the walls. The mucous membrane of the bulb is edematous, hyperemic, with a 0.6 cm scar on the anterior wall and a 1.0x0.8 cm rounded ulcerative defect with a hyperemic roller on the back, and the bottom is covered with fibrin. A biopsy was taken.
Ultrasound of the abdominal organs: liver and gallbladder without pathology. There is a large amount of contents in the stomach on an empty stomach, its walls are thickened. Pancreas: head 21 mm (norm-18), body 18 mm (norm-15), tail 24 mm (norm-18), its echogenicity is reduced.
Urease test for Hp infection: positive (++).
Task
1. Make a diagnosis.
2. Etiology of the disease.
3. Prescribe treatment for this patient.
4. What aggravating factors can be identified during this disease?
Answers to case 13
1. Peptic ulcer of the duodenal bulb, exacerbation, uncomplicated. Chronic non-atrophic gastritis, Hp-associated.
Anamnesis: burdened heredity, diet disorders, food allergies, psycho-emotional stress.
Pain syndrome: typical localization in the epigastrium and pyloroduodenal region, occurs after eating after 1-2 hours, hunger and night pains; vomiting, which brings relief.
Objectively: moderate muscular defenseness, pain in the epigastric and pyloroduodenal regions;
EGDS data: the presence of a peptic ulcer; inflammation of the gastric mucosa, duodenum, typical of gastroduodenitis and peptic ulcer;
Hp infection test ++.
2. Hp infection, heredity, food allergy, chronic gastroduodenitis, stress
3. Table 1 for 4 weeks (sparing the mucous membrane of the stomach and duodenum 12),
Antihelicobacterial therapy, taking into account the presence of Hp infection. The drugs of choice are amoxicillin, clarithromycin, de-nol, and esomeprazole.
4. Food allergies, diet disorders, stress (conflict at school).

Case 14 ** 2
A 9-year-old girl
She has been ill for 2 months. After suffering from acute respiratory viral infections, the girl began to complain of thirst, increased appetite, weight loss, and frequent urination. 5 days before the hospitalization, the condition deteriorated sharply, abdominal pain, vomiting, drowsiness, and the smell of acetone from the mouth appeared. On the eve of hospitalization, shortness of breath, repeated vomiting with abdominal pain, and constipation appeared.
Anamnesis data: a child from the 2nd, normal pregnancy and normal birth. Body weight at birth is 3500 g, length is 50 cm. She grew and developed satisfactorily. Previous illnesses: acute respiratory viral infections 2 times a year, chickenpox at the age of 6. Vaccinations are made according to age. My maternal grandmother has type 2 diabetes.
Objective examination data. Upon admission, the condition is severe: severe weakness, sleeps, but when contacted, answers monosyllabic questions and immediately falls asleep. The skin is dry, and the turgor of the tissues is reduced. Dyspnea. Harsh breathing during auscultation. Tachycardia, heart sounds are muffled. Blood

pressure is 90/50 mmHg. The pillar. The abdomen is painful on palpation. Liver + 1.5 cm from under the costal arch. Urination is frequent, and the vulva is hyperemic.
Examination data: Blood sugar 30 mmol/l, Sugar in urine (300 ml) 5%, acetone ++++, CBS: PH 7.1, VE – (-20).
Task
1. Make a diagnosis.
2. Continue the examination.
3. Prescribe treatment.
4. Substantiate the phase of the disease.
5. Give an assessment of the CBS indicators.
Answers to case 14
1. Type I diabetes mellitus, familial, grade II ketoacidotic coma, vulvitis.
Rationale: thirst, increased appetite, weight loss, frequent urination, dry skin, acetone odor from the mouth, progressive increase in these symptoms, drowsiness, vomiting, inactivity, shortness of breath, abdominal pain, enlarged liver, vulvar hyperemia, blood sugar 30 mmol / l, acetone in urine ++++, Grandmothers have diabetes mellitus, which is typical for type 1 diabetes.
Constipation, repeated vomiting, shortness of breath, abdominal pain, severe weakness, and metabolic decompensated acidosis are characteristic of grade II diabetic ketoacidotic coma.
2. Blood sugar tests every 3-4 hours, glucosuric profile, CBS every 3-4 hours biochemical blood analysis (protein and fractions, urea, cholesterol, lipoproteins, bilirubin, transaminases, electrolytes), ECG.
3. Infusion therapy: 5-10% glucose + saline solution, 4-5% K chloride solution, panangin, heparin, vitamin C.
4. Constipation, repeated vomiting, shortness of breath, abdominal pain, severe weakness, metabolic decompensated acidosis are characteristic of diabetic ketoacidotic coma of the II degree.
5. Decompensated metabolic acidosis (pH – 7.1, VE-(-20).

Task 15 1 2 3
The girl is 12 days old.
Anamnesis data: a child from the 1st, normal pregnancy, from an urgent delivery. Birth weight 3600, length 52 cm. She screamed immediately, was put to her chest after 12 hours, and sucked actively. The parents are young and healthy. Heredity is not burdened.
At birth, attention was drawn to the irregular structure of the external genitalia: the labia majora resembled a scrotum, and the clitoris was hypertrophied. After being discharged from the 8th day of life, the child began vomiting, which has intensified in recent days, the girl began to refuse to feed, noticeably lost weight.
Objective examination data: the condition is severe, sluggish, vomiting continues, tissue turgor is reduced, the skin is dry, pigmentation in the nipple area. The large fontanel is sunken. Breathing is harsh. The heart tones are moderately muted. The abdomen is soft, with slight pain in the epigastric region. The stool is diluted 1 time. Urination is rare.
Survey data: Biochemical blood test: total protein 65 g/l, urea 6.4 mmol/L, cholesterol 4.2 mmol/L, total bilirubin 4 mmol/L, potassium 6.8 mmol/L, sodium 129.0 mmol/L, Ca 2.4 mmol/L, AlT – 20 Units/l.
Task
1.Make a dignosis
2. What indicator confirms the diagnosis?
3. Prescribe treatment.
4. Make a differential diagnosis
5. Prognosis in case of incorrect diagnosis of this disease.
Answers to case 15
Congenital dysfunction of the adrenal cortex, a losing form. The clinic notes an irregular structure of the genitals (labia majora resemble a scrotum, the clitoris is hypertrophied, pigmentation around the nipples). Vomiting, exsicosis are noted, hyperkalemia and hyponatremia were detected in a biochemical blood test.
2. To confirm the diagnosis, it is necessary to determine 17-hydroxyprogesterone in the blood.

3. Glucocorticoids and mineral corticoids are prescribed to correct the hormonal profile.
4. The wasting form of congenital adrenal cortex dysfunction should be differentiated from pyloric stenosis.
5. With late treatment, children tend to remain stunted for life.

Case 16***
The girl is 11 years old
Anamnesis data: a girl from the 2nd normal pregnancy, 2 normal urgent deliveries. Body weight at birth is 3500 g, length is 50 cm. The newborn period was without any special features, it developed normally. School performance was excellent in the 1st grade, then decreased.
Previous illnesses: measles in severe form at the age of 6, acute respiratory viral infections – 3-4 times a year. At the age of 8, she was diagnosed with tuberculosis intoxication and received ftivazid. Since the age of 7, there has been a decrease in appetite and the appearance of constipation. She stopped growing at the age of 8, and the tooth replacement was disrupted.
Objective examination data: height 124 cm, weight 26 kg upon admission to the hospital. The pulse rate is 60 per minute. Blood pressure is 75/35 mmHg. Lethargy, dry skin, and brittle hair are noted. Auscultation – deafness of heart tones, systolic murmur. The liver protrudes from under the edge of the costal arch by 3 cm.
Laboratory research data:
• Cholesterol 18 mmol/l, blood protein 79 g/l
• Radiograph of the hands: bone differentiation corresponds to 6 years.
Task:
1. Make a diagnosis.
2. Outline a further examination plan.
3. Prescribe a treatment.
Answers to case 16
1. Acquired, moderate hypothyroidism. The diagnosis was made on the basis of medical history and clinic data. Acquired hypothyroidism is supported by the age of onset of the disease (from the age of 7), and clinical symptoms such as decreased appetite, constipation, impaired tooth replacement, stunted growth, brittle hair, bradycardia, deafness of heart tones, arterial hypotension up to 75/35 mmHg, and an increase in liver size. Typical clinical symptoms are moderate, indicating moderate severity of the disease.
The examination revealed hypercholesterolemia of up to 18 mmol/l, and a lag in bone age.
2. Ultrasound of the thyroid gland: there may be a decrease in size and signs of autoimmune thyroiditis. Hormonal profile: decreased T4 and T3, TSH changes (increase in primary, decrease in secondary or tertiary hypothyroidism). With a decrease in TSH, exclude pathology of the hypothalamic-pituitary region (X-ray of the skull- Turkish saddle, EEG, CT scan of the brain).
In a general blood test, anemia of an iron and protein deficiency nature can often be detected.
The ECG shows bradycardia, low voltage of the teeth, and blockages.
3. The main one is lifelong hormone replacement therapy.
More often than others, L-thyroxine is used in an individually selected dose, against which all clinical symptoms should disappear and metabolic and hormonal parameters should normalize.

Case 17**
Girl, 10 years old Medical history: a child from 1 pregnancy, during which acute respiratory diseases were repeatedly noted. In childbirth, the umbilical cord is wrapped around the neck. At birth, the body weight is 2500 g, the length is 49 cm. The Apgar score is 8/9 points. Previous illnesses: acute respiratory viral infections, rubella at the age of 4, chickenpox at the age of 6, repeated sore throats from the age of 1.5.
A year ago, the mother noticed that the child had fatigue, weakness, fatigue, increased appetite, weight loss, bilateral exophthalmos. In the last 2 weeks, the condition has worsened: dizziness, fainting, irritability, trembling of the upper extremities, changes in handwriting, sweating.
Objective examination data: Height 142 cm, weight 21.5 kg. Fussiness, mood lability, and sweating are noted. Funnel-shaped chest. Pulsation of the neck vessels is pronounced. Apical thrust in the V intercostal space,

reinforced. The boundaries of relative cardiac dullness are: left – along the mid–clavicular line, right - along the right edge of the sternum. The tones of the heart are accentuated. Pulse is 138 per minute, blood pressure is 120/45 mmHg. Liver +1 cm. The thyroid gland deforms the neck, is elastic, homogeneous, and painless. Exophthalmos, Grefe's symptom +, Mobius's symptom +. Tremor of the eyelids, tongue, fingers of outstretched hands. Laboratory research data:

• Complete blood count: erythrocytes 5.4 x 1012/L, Hb126 g/L, leukocytes 7.9 x 109/L, platelets 344 x 109/L, n/I – 2%, s/I – 57%, lymphocytes 24%, eosinophils - 3%, ESR 5 mm/hr. The duration of bleeding is 3!, blood clotting: the beginning is 1!, the end is 3!.

• Urinalysis: clear, light yellow, relative density is 1025, protein is absent, sugar is not present, leukocytes are 1 in the field of vision, erythrocytes are absent.

• Biochemical blood test: total protein 66 g/L, urea 3.6 mmol/L, triglycerides 0.99, cholesterol 2.8 mmol/L, beta – lipoproteins 26, indirect bilirubin 15 mmol/L, seromucoid 0.31, sugar 6.6 mmol/L, thymol test 3.4, K – 3.9 mmol/L, Ca++, 1.12 mmol/L.

• Blood test for hormones: T3 free – 35 (norm 4.25-8.10), T4 free. 80.3 (norm 10 – 25.0), TSH – 0 (norm 0.24 – 3.5).

Task:

1. Make and justify the diagnosis.
2. Evaluate the research.
3. Continue the examination.
4. Prescribe treatment.

Answers case 17

1. Diffuse toxic goiter, grade II, moderate severity.

The thyroid gland is enlarged and deformes the neck, which corresponds to grade II goiter (according to the WHO classification). The gland is elastic and homogeneous on palpation, which is typical for diffuse goiter. The following symptoms of thyrotoxicosis are expressed: fatigue, increased appetite, weight loss, irritability, hand tremor, handwriting changes, sweating, tachycardia up to 138 beats per minute, increased systolic blood pressure, decreased diastolic blood pressure, that is, high pulse blood pressure (120/45), exophthalmos, positive eye symptoms (Grefe, Me6ius), eyelid tremor, the tongue of the fingers of outstretched hands. The above data are expressed moderately, which corresponds to the average severity of the disease.

2. The diagnosis is confirmed by the hormonal profile – increased T3 freedom, T4 freedom, decreased TSH. The ECG revealed tachycardia, sinus arrhythmia, increased activity of the left ventricular myocardium. Metabolic changes in the blood – a decrease in cholesterol and an increase in glucose are characteristic of thyrotoxicosis.

3. Radiograph of the hand – this pathology is characterized by an acceleration of bone age.

4. Thyrostatics (mercazolil, metisol) are the main treatment, before which a general blood test with hemosyndrome is required.

When prescribing these drugs, there may be side effects: leukopenia, thrombocytopenia, neutropenia, which may be a contraindication for prescribing these drugs. It is necessary to monitor these indicators in dynamics. The initial dose of thyrostatics is 0.5-1 mg / kg of body weight in 3 doses. With a decrease in symptoms of thyrotoxicosis, the dose of the drug is reduced to a maintenance dose (5-10 mg / day). Beta–blockers are prescribed to normalize pulse rate and blood pressure. Sedative therapy in the form of valerian preparations is indicated.

Case 18 * 1, 3, 5

The boy is 11 years old

In February, the child's skin began to darken, there was weakness, headache, craving for salt. Over the summer, the darkening of the skin acquired an intensity unusual for a normal reaction to sunlight. Since October of this year, headaches have become more frequent, appetite has decreased, blood pressure drops with a tendency to decrease, and drowsiness have been noted.

He was treated in the neurological department, where cerebroprotective and symptomatic therapy was performed. The condition worsened and the child was transferred to the endocrinology department.
Anamnesis data: a boy from the 1st pregnancy with toxicosis in the first trimester. Delivery on time, independent. Aspiration of green amniotic fluid during childbirth. Birth weight 3600 g, length 54 cm. He screamed after sucking off the mucus. On the 4th day, pneumonia was diagnosed. During the examination and treatment in the neonatal unit, a congenital heart defect (non-closure of the botall duct) was detected, for which the child was operated at the age of 3.
Heredity: brother – CHD (atrial septal defect; paternal grandmother – type II diabetes mellitus, paternal grandfather – CHD (atrial septal defect).
Objective examination data: the condition is serious, conscious. He reacts negatively to the examination. The position is passive. Body temperature 36.10 C. The skin is bronze in color (even on areas of the body that are closed from sunlight), and areas of hyperpigmentation are especially pronounced on the extensor surfaces of both elbow and knee joints, sacrum, birthmarks, and scrotum. The muscular and subcutaneous fat layer is not pronounced enough, the turgor of the tissues is preserved, and the hair is light. The gum mucosa is dirty gray in color. The tongue is covered with a gray coating. Vesicular respiration. Respiratory rate is 92 per minute, blood pressure is 80/40 mmHg. There is no appetite.
Clinical blood test: Hb 123 g/l, erythrocytes - $4.2x10^{12}$/l, MCH 26, platelets - 246000, Le $9.4X10^{9}$/l, p 1%, s 74%, lymph. 16%, mon. 2%, ESR 3 mm/hour.
Urinalysis: yellow, density – 1015, transparent, protein – absent, glucose – absent, ketone bodies – absent, blood reaction – negative, epithelium – absent, leukocytes – 1 in the field of vision, cylinders – absent, bacteria – absent.
Biochemical blood test: total protein 66 g/L, urea 9.0 mmol/L, creatinine 54.0 mmol/L, total cholesterol 2.7 mmol/L, triglycerides 0.78, β-lipoproteins 21, K 6.0 mmol/L, sodium 109 mmol/L, calcium ++ 1.1 mmol/L, AlAT 25, AsAT 31, LDH 300, glucose 3.5 mmol/l.
Blood glucose test: in 900 - 2.8 mmol /L, in 1300 - 4.5 mmol /L.
Hormonal profile: cortisol 87 (norm 150-660).
Task
1. Make and justify the diagnosis.
2. Evaluate the research.
3. Continue the examination.
4. Prescribe treatment.
Answers to case 18
1. Chronic adrenal insufficiency, primary, acquired, decompensation phase.
The following complaints and medical history data support acquired chronic adrenal insufficiency: weakness, headache, salt cravings, darkening of the skin, decreased appetite, weight loss, which lasted about six months. Darkening of the skin indicates the primacy of this pathology.
2. The diagnosis is confirmed by metabolic changes: typically– an increase in K, a decrease in sodium and glucose, and a decrease in cortisol. The lack of treatment caused decompensation of the disease: severe weakness, nausea, decreased blood pressure, darkening of the skin and mucous membranes.
3. Continue the examination: ECG – since electrolyte disturbances are pronounced in this disease (signs of hyperkalemia are noted on the ECG, rhythm disturbances are possible), ultrasound of the adrenal glands – with the primary genesis of the disease, a decrease in their size is sometimes detected, ECG and electrolytes change during treatment.
4. Lifelong hormone replacement therapy. The dose of glucocorticoids (cortef, prednisone) and mineral corticoids (cortinef) is individually selected.

Case 19 *
A 7-year-old girl was admitted to the hospital complaining of pain in the lumbar region and frequent urination.

Medical history data: a child from the first pregnancy, was born on time. The neonatal period was uneventful. She suffered from chickenpox and rubella from childhood infections. He often suffers from acute respiratory viral infections.
The girl is periodically bothered by abdominal pain; her temperature often rises; sometimes painful urination is noted.
Objective examination data: upon admission to the hospital, the condition is of moderate severity. The skin is pale, the temperature is 38 ° C. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 30 per minute. The tones of the heart are clear and loud. The heart rate is 88 per minute. Pasternatsky's symptom is positive on both sides. Urination is frequent and painful.
Survey data:
Total blood count: Hb - 114 g/L, er - 4.5x 1012/L, leuc. - 18.5 x 109/L, n/I - 10%, s - 70%, L - 22%, m - 9%, ESR - 30 mm/hour.
General urinalysis: alkaline reaction, protein 0.06, white blood cells – completely in the field of vision, red blood cells – 0-1 in the field of vision, bacteria - a lot.
Kidney ultrasound: the kidneys are positioned correctly, the size of the left kidney is larger than normal. The cup-pelvis system is expanded on both sides, more on the left. Suspected doubling of the left kidney.
Task
1. Make a diagnosis and justify it.
2. Specify additional research methods to clarify the diagnosis.
3. What is the purpose of cystography?
4. What kind of research should be conducted to prescribe adequate therapy?
Answers to case 19
1. Secondary chronic pyelonephritis on the background of abnormal kidney development, the stage of exacerbation. - Chronic, as there is a history of repeated fever, combined with abdominal pain and painful urination - Secondary, because ultrasound revealed an expansion of the collecting systems of both kidneys and a suspected doubling of the kidney on the left (developmental anomaly) - Pyelonephritis is in the acute stage, because in the anamnesis and upon admission there are phenomena of general infectious toxicosis, a positive symptom of Pasternatsky, pronounced leukocyturia and bacteriuria, an inflammatory reaction of peripheral blood
2. Microbiological examination of urine (microflora typing taking into account sensitivity to antibiotics), Zimnitsky urine analysis (pyelonephritis is characterized by a moderate restriction of the concentration ability of the kidneys), cystography, cystoscopy according to indications, nephroscintigraphy 6 months after the relief of pyelonephritis attack (the presence of foci of renal parenchyma wrinkling in a child with a chronic inflammatory process)
3. According to ultrasound (enlargement of the collecting kidney system), the presence of vesicoureteral reflux cannot be excluded.
4. Determination of the sensitivity of microflora to antibiotics (antibioticogram)

Case 20 *
A 5-year-old girl was admitted to the hospital complaining of swelling.
Anamnesis data: a child from the first normal pregnancy, delivery on time. Birth weight 3300 gr., length 52cm. Physical psychomotor development without special features. Previous illnesses: chickenpox, often has acute respiratory viral infections. Allergic history: atopic dermatitis up to 3 years old.
After suffering from acute respiratory viral infections, the girl developed swelling on her face and rare urination. The district doctor diagnosed Quincke's edema and prescribed suprastin (chloropyramine). Despite the ongoing therapy, the swelling increased, and the girl was hospitalized.
Physical examination: upon admission to the hospital, the condition is severe. The skin is pale. Pronounced swelling of the face, lower leg, feet, anterior abdominal wall, ascites. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 34 per minute. The heart tones are muted. Pulse is 110 beats per minute,

blood pressure is 90/60 mmHg. The abdomen is soft and painless. Liver +2.0 cm from under the edge of the costal arch. He rarely urinates. She excreted 180 ml of urine per day.
- In the urine analysis, protein 8.0 0/00, leukocytes 2-3 in the field of vision, red blood cells are absent.
- Complete blood count: Hb - 127 g/L, ER - $3.8x10^{12}$/L, Le 10.2 $x10^{9}$/L, n 1%, s 36%, L 54%, e - 2%, m - 8%, ESR - 50 mm/hour.
Task
1. Make a diagnosis
2. Justify the diagnosis.
3. What biochemical blood parameters are necessary to clarify the diagnosis?
4. Diet for this disease
5. Prescribe a treatment.
Answers to case 20
1-2.Acute glomerulonephritis with nephrotic syndrome (idiopathic nephrotic syndrome).
Preschool age, the onset of the disease after acute respiratory viral infections, severe edematous syndrome, oliguria, massive proteinuria, and accelerated ESR are typical of nephrotic syndrome (morphologically, it is most likely a disease of minimal changes)
3. Total protein and protein fractions (pronounced hypoproteinemia in combination with hypoalbuminemia can be expected), lipidogram (compensatory increase in cholesterol and triglycerides).
Elevated urea, creatinine, and blood electrolytes (hyperkalemia is possible) may indicate the development of acute renal failure.
Coagulogram (tendency to hypercoagulation)
4. Exclusion of salt and meat (contains sodium chloride), protein restriction (with massive proteinuria), fluid intake in accordance with diuresis and the patient's desire.
5. Bed rest for the period of severe edema, then do not limit physical activity (prevention of osteoporosis)
- Diet (see above),
- Short-course antibacterial therapy for the period of severe edema (prevention of bacterial complications-pneumonia, peritonitis with anasarca).
- Immunosuppressive therapy – prednisone 2 mg / kg or 60 mg/ m2 of body surface area for 6 weeks daily, followed by a switch to an alternating regimen of 1-1.5 mg / kg or 40 mg / m2 for 6 weeks, followed by gradual withdrawal with normal urine tests.
- Anticoagulants, antiplatelet agents (heparin, curantil) to prevent microthrombosis in severe hypovolemia
- Diuretics - extremely careful administration of loop diuretics against the background of adequate hydration of the patient (intravenous drip of rheopolyglucine followed by slow administration of lasix 1-5 mg / kg in 150 ml of glucose)
- In the future, proton pump inhibitors (side effects of corticosteroids on the gastrointestinal tract)

Case 21 **
The girl, 11 years old.
Medical history data: from the 2nd pregnancy, delivery in term. The neonatal period was normal. After 1 year, the child periodically had a rash and Quincke's edema after ingestion of eggs, chocolate, oranges. He often suffers from acute respiratory viral infections.
She suffered from follicular tonsillitis 15 days before her hospitalization. She received antibiotic treatment and drank a lot, including orange juice. On the 14th day of the illness, the child developed pain in the ankle joint and a rash on his legs.
Physical examination upon admission: on the shins, thighs, buttocks, symmetrical, more on the extensor surfaces and around the joints, there is an abundant exudative hemorrhagic rash. The ankle joints are swollen. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 20 per minute. The tones of the heart are sonorous. The pulse rate is 80 per minute. Blood pressure is 110/60 mmHg. The abdomen is soft and painful on palpation around the navel, at the point of the gallbladder. The stool was after the enema, decorated, with a small amount of mucus.

The formula of sexual development: Ma2, P2, A2, Me0.
- Blood test: Hb-126 g/l, er.-4.0x10^{12}/l, Pt -322x10^{9}/l, Le 7.4x10^{9}/l, p-6%, s-64%.eos.-8%, L.-18%.m-4%, ESR-24 mm/hour.
The bleeding time according to Duque is 3 minutes, the clotting time according to Burger: the beginning is 1 minute, the end is 3 minutes.
Task
1. Make a diagnosis.
2. What clinical syndromes are characteristic of this disease?
3. The examination plan.
4. Treatment plan.
5. What factors could contribute to the development of the disease?
Answers to case 21
1. Hemorrhagic vasculitis with skin, joint and abdominal syndrome. The diagnosis is based on anamnesis (food allergy to eggs, chocolate, citrus fruits). This disease developed 2 weeks after suffering a sore throat. In the clinic of this child's disease, typical manifestations on the skin are exudative hemorrhagic rash on the thighs, lower buttocks, soreness and swelling of the ankle joints, cramping abdominal pain typical of abdominal syndrome.
2. a) cutaneous, b) articular, c) abdominal, d) renal
3. a) Blood test + bleeding time and clotting time, b) coagulogram, c) stool for coprology,
d) urinalysis e) biochemical blood analysis (protein and its fractions, urea, creatinine, potassium, sodium)
4. a) Diet 1
b) detoxification therapy, c) heparin therapy, d) desensitizing therapy
e) rehabilitation of foci of infection.
5. a) allergic potential of the body (exudative diathesis, food allergy),
b) frequent acute respiratory viral infections, c) follicular sore throat suffered in 2 weeks.

Task 22 1,3,5**
The girl is 7 years old.
Anamnesis data: a child from the 1st, normal pregnancy. The delivery in term. She grew and developed normally. She had acute respiratory viral infections 3-4 times a year.
A month before admission, she began to complain of abdominal pain, and her appetite worsened. There were periodic short-term temperature increases up to 38-38.5 degrees without signs of inflammation of the upper respiratory tract. I didn't go to the doctor. In the last days before the hospitalization, pain appeared in the right knee joint, and the child was hospitalized.
Physical examination data upon admission: the skin is pale with a grayish tinge. The mucous membranes are pale. Isolated ecchymoses and an uncommon petechial rash on the legs and chest. Posterior cervical, submandibular, tonsillar, axillary and inguinal lymph nodes up to 1x2 cm, multiple, mobile are palpated. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 25 per minute. Tachycardia. Heart tones are muted, systolic murmur is at the top. Blood pressure is 96/50 mmHg. The abdomen is soft, with moderate pain on palpation in the navel area. The liver protrudes from under the edge of the costal arch by 3 cm, the spleen by 2 cm. Urination is free.
- Blood test: hemoglobin -89 g/l, er.-2.5 x1012/l, platelets-15 x 109/l, leukemia- 42.0 x 109/l, blasts-98%, lymph - 2%, ESR-29 mm/hour.
Task
1. Make a diagnosis.
2. Additional examination plan.
3. What kind of research will clarify the form of the disease?
4. Treatment plan.
5. What diseases should be given a differential diagnosis according to the clinical picture?
Answers to case 22

1. Acute leukemia. Justification: a month before admission, appetite worsened, abdominal pain appeared, and the temperature periodically rose to 38-38.5 ° C without signs of an inflammatory process. On examination, there are signs of intoxication (the skin is pale with a grayish tinge, the mucous membranes are also pale). There are petechiae and ecchymoses on the skin; all groups of lymph nodes, liver and spleen are enlarged. Tachycardia, heart murmur. In the blood test, erythrocytes, hemoglobin, platelets, leukocytosis, and blasts are reduced by 98%.
2. Additional examination plan:
- Bone marrow puncture, to confirm the diagnosis and assess normal bone marrow circulation.
- X-ray of the right knee joint. It should be carried out to identify the cause of pain in it (osteoporosis, destruction).
3. Which study will clarify the form of the disease?
- Cytochemical study will differentiate the main variants of acute leukemia (lymphoblastic, myeloblastic, monoblastic, erythromyelosis).
- Immunological. The use of immunodiagnostics of leukemic cells will make it possible to identify T, B, and O subvariants of acute lymphoblastic leukemia, which have clinical features and different sensitivity to therapy.
4. Treatment plan.
- A combination of chemotherapy drugs: 6 mercaptopurine, methotrexate, prednisone, vincristine, cyclophosphamide, rubomycin, L-asparaginase. Chemotherapeutic treatment is carried out in accordance with the data of cellular kinetics, which determines the order and rhythm of their administration.
- Hemotherapy. This is a transfusion of whole blood or its components (erythromass, leukomass, thrombomass) for replacement purposes in connection with the development of anemia, neutropenia, and thrombocytopenia.
- Antibiotic therapy. Antibiotic therapy is used to prevent septic complications, since in this group of patients the body's resistance (phagocytosis, immune response) is suppressed as a result of the tumor process and prolonged cytostatic therapy.
5. What diseases should be given a differential diagnosis?
- Hypoplastic anemia. Common clinical signs: anemia (pallor of the skin and mucous membranes, tachycardia), hemorrhagic syndrome (petechiae, bruises, bleeding).
Differences in the clinical picture: hypoplastic anemia does not have hyperplastic syndrome (enlargement of lymph nodes, liver and spleen, pain in bones and joints is not characteristic). There are no blast cells in blood tests, and the number of bone marrow cells in the bone marrow punctate decreases sharply.
- Thrombocytopenic purpura. Common clinical signs: hemorrhagic syndrome (petechiae, bruises, bleeding). Differences in the clinical picture: the patient's well-being is satisfactory, there is no intoxication syndrome (grayish skin tone, weakness, lethargy, decreased appetite). There is no enlargement of the lymph nodes, liver, and spleen. There are normal numbers of neutrophils in blood tests, and there are no blast cells. In the bone marrow, only the megakaryocytic germ is changed (either increased or decreased).
- Infectious mononucleosis. Common clinical signs: lymphoproliferative syndrome (enlargement of all groups of lymph nodes, liver, and spleen). Differences in the clinical picture: there is no anemic and hemorrhagic1 syndromes. Blood tests show atypical mononuclears and there are no blast cells.
- Lymphogranulomatosis. Common clinical symptoms: enlarged lymph nodes. Differences in the clinic: with lymphogranulomatosis, there is a limited increase in lymph nodes at the beginning, itchy skin, and sweating. There are no blast cells in the blood. During a lymph node puncture, Berezovsky-Sternberg cells are detected.

Case 23** 1, 2,3,5
A 3-month-old child was admitted to the hospital with complaints of vomiting, frequent loose stools, and refusal to eat.
From the anamnesis of life: a child from 1 normal pregnancy. Delivery on time, physiological. He screamed at once. Birth weight 3300, length 51 cm. The newborn period proceeded smoothly. She has been on artificial feeding since 1 month due to hypogalactyly in her mother. It feeds on an adapted mixture, by the hour – 6 times a day and sucks 130-140 g. From 2 months it receives juices, before illness – 30.0 ml. A few days ago, they began to give cottage cheese for 5 g.

He gained weight: for the 1st month - 600 g., for the 2nd – 800 g., for the 3rd - 750 g. He holds his head for 2 months, watches his eyes, hums. I haven't been ill until now.
Epidemiological history: there were no acute gastrointestinal diseases in the family. Medical history: became acutely ill, fever increased to 37.5, vomiting appeared, loose stools up to 10 times on the first day of the disease. Upon examination by the district pediatrician: the temperature is normal, the state of health is slightly disturbed. The stool was examined – mushy, with an abundant admixture of mucus and greenery. When the mother was questioned, it turned out that she had made cottage cheese from kefir the day before and for the first time gave the child 20 g. It was recommended to pause feeding for 6 hours and reduce the feeding dose by half, and give the baby a drink of slightly sweetened weak tea. Over the next 2 days, the child's condition continued to deteriorate; he had a temperature of 37.2-37.5, vomiting up to 3-5 times a day, and stool increased up to 20 times. He was re-examined by a doctor and hospitalized.
Clinical examination data: temperature 37.0. The child's condition is very severe, sluggish. The scream is almost soundless, weak. Motor-inactive. The skin is pale, with a “marble” pattern, slightly moist to the touch. The turgor of the tissues is sharply reduced. The skin on the inner thigh gathers into a fold. The large fontanel sinks in. The facial features are pointed. The breathing rate is 40-45 per minute. There were no respiratory abnormalities. The pulse rate is 150 beats per minute, the heart tones are slightly muffled. Sucks sluggishly, reluctantly. It does not suck out more than 30 ml. Vomiting occurs when trying to give more. The tongue is covered with a whitish coating, but moist. The abdomen is swollen, and rumbling is pronounced on palpation. There is a painful reaction to palpation of the abdomen. The liver protrudes from under the edge of the costal arch by 2 cm. The spleen is not palpable. Stools for the first day of stay in the department up to 20 times, liquid with an admixture of mucus and greenery, with a small amount of feces. The anus opens easily when the buttocks are dilated.
Urination up to 5-6 times a day, in small portions.
In the neuropsychiatric status: sluggish, muscle tone is reduced, tendon reflexes are alive. He reacts to the examination with a weak cry.
Blood test: Hb-140 g/l, er. -5.0x1012 , leuc. – 15x109 , Pt. -15%, S.I. -55%, L. – 25%, M. – 5%, ESR – 20 mm/hour.
2. Blood: pH – 7.32, pCO2 – 35, VE – (-) 7.0
3. Biochemical blood test: total protein – 70.0 g/l, sodium – 128 mmol/L, potassium – 4.0 mmol/L.
Task
1. Identify the main clinical syndromes in the clinical picture of the patient's disease.
2. What are the most likely causes of the disease in our patient?
3. What is the main reason for the severity of the patient's condition, and what causes it?
4. Upon admission, the child was weighed, and his body weight turned out to be 5,000 g.
a) what is the degree of exicosis?
b) what is the likely type of dehydration in this patient, indicate typical clinical and laboratory signs?
5. Formulate a detailed diagnosis of our patient's disease at this stage of his examination.
6. Name the main directions of treatment measures for this patient.
7. To restore water-salt metabolism:
a) determine the total amount of fluid per day needed by this child to eliminate dehydration.
b) what components will this estimated amount of fluid consist of for this child on the first day of treatment,
c) list the therapeutic solutions needed for infusion therapy of this patient.
Answers to case 23
1. The child has the following syndromes: - infectious toxicosis, - exsicosis, - regurgitation and vomiting.
2. The most likely cause of the disease is an intestinal infection, however, it must be remembered that consuming kefir in such large quantities can lead to functional dyspepsia. In the future, it is necessary to make a differential diagnosis between them using additional clinical and laboratory data.
3. The main cause of the severity of the condition is associated with the syndrome of regurgitation and vomiting, which is primary, infectious toxicosis, exicosis, metabolic disorders are associated with loss of fluid and electrolytes directly due to dyspeptic disorders.

4.
a) body weight deficiency is defined as follows: the proper body weight at this age is:
3300+600+800+750=5450 G. We know the actual body weight At admission, the child's weight turned out to be 5000 g. This means that in 3 days the child lost 5450-5000 = 450 g 450x100: 5450= 8.26%, which corresponds to grade II exicosis.
b) hypotonic type of exsicosis (lethargy, adynamia, decreased muscle tone, tachycardia, deafness of heart tones, low serum K levels).
5. Intestinal infection of unknown etiology, intestinal toxicosis with grade II exicosis, hypotonic type.
6. Unloading of food: an introductory tea break for 8-12 hours, then an adapted low-lactose mixture (fermented milk) - fractional meals of 20-30 ml every 2 hours 10 times a day. Fractional rehydration with Rehydrone, given the presence of repeated vomiting in very small amounts.
- Etiotropic therapy: parenteral cephalosporins, oral aminoglycosides.
- Pathogenetic therapy: correction of water and electrolyte disorders – rehydration infusion therapy with glucose-saline solutions, polarizing mixture (glucose-insulin-potassium mixture), fight against acidosis.
- The second stage is the use of bacteriophages, probiotics, and enzymes.
7. The total amount of fluid is about 190-200 ml / kg of body weight.
Necessary components:
- Colloidal solutions: plasma, 10% albumin solution, rheopolyglucine,
- Crystalloid solutions: 10% glucose solution, Ringer's solution, saline solution, 4-5% potassium chloride solution, B vitamins.

Case 24 **
The boy is 2 months old.
Medical history data: a child from 4 pregnancies to 2 births. The previous pregnancy ended with a medical abortion. The real pregnancy occurred 6 months after the abortion. Course: toxicosis of the 2nd half (nephropathy with edema and proteinuria, in the 3rd trimester she suffered from influenza with symptoms of infectious toxicosis).
Birth at 40 weeks, spontaneous, early discharge of amniotic fluid (10 hours before the rest period), green, cloudy waters. The duration of labor is 4 hours. The child screamed immediately, was applied to the breast for 3 days, took the breast badly, sucked sluggishly. The Apgar score is 7/8 points. Birth weight 4500, length 54 cm. Physiological weight loss - 250 g, by the time of discharge from the hospital, the weight had not recovered. From the moment of birth, there was at first an abundance of regurgitation, and at the time of hospitalization - after almost every feeding.
The data of an objective examination in the admission department: age 2 months, the child is restless, blushes when screaming, there is a tilting of the head and tension of the large fontanel. After adapting to the examination, he calmed down and reacts with positive emotions. The head is dolichocephalic in shape with an overhanging occiput, the seams are not closed, a large fontanel 2x2 cm, slightly tense. Moderate chin tremor, clonus of the lower extremities, expansion of the tendon reflex zone. Grefe's symptom is determined.
1. A presumptive diagnosis?
2. What diseases should be differentiated from?
3. The optimal examination plan?
4. Treatment program?
The answer to problem 24:
1. The child has a perinatal CNS lesion of hypoxic origin with intracranial hypertension syndromes, increased neuro-reflex excitability, regurgitation syndrome. The diagnosis can be established on the basis of medical history data.:
- This pregnancy occurred a short time after the abortion.
- Burdened pregnancy (nephropathy, infectious diseases with symptoms of toxicosis).
- Early discharge of amniotic fluid, they are green, cloudy (signs of chronic intrauterine hypoxia).
- Rapid delivery (duration 4 hours).

- Low score on the Apgar scale (8/9 is acceptable, 9/10 points are ideal)
- Large fetus (the combination of rapid delivery and large fetus creates the prerequisites for hypoxic-traumatic damage to the central nervous system)

Objective inspection data:

Restlessness, tilting of the head and tension of the large fontanel (a sign of intracranial hypertension), overhanging occiput (a sign of intrauterine hypoxia), chin tremor, clonus of the lower extremities, expansion of tendon reflexes (a sign of increased neuro-reflex excitability), Grefe's symptom (a sign of intracranial hypertension).

2. In all cases of intracranial hypertension, especially with tension of the large fontanel, tilting of the head, symptoms of hyperesthesia, it is necessary to make a differential diagnosis.:
- With meningitis - With intracranial hemorrhage - With neurotoxicosis (especially if there are signs of infection).

3. General blood test (to exclude bacterial infection).

Biochemical blood test (electrolytes, protein).

Neurosonography (ultrasound examination of the brain through a large fontanel).

Fundus examination (changes with severe intracranial hypertension)

Consultation with a neurologist

When symptoms of infectious toxicosis are added, a lumbar puncture (diagnostic and therapeutic measure) is indicated.

4. If it is not meningitis or subarachnoid hemorrhage, then all therapeutic measures are aimed at establishing a balance between the production and outflow of cerebrospinal fluid, therefore they are prescribed:
- Diuretics that selectively reduce the formation and increase the outflow of cerebrospinal fluid (diacarb at an initial dose of 60 mg in the morning according to the scheme -3 days to give, day break). Glycerol.
- Asparkam, panangin (to compensate for the resulting deficiency of K and magnesium).
- Glycine (to improve metabolic processes in the brain
- Sedative drugs: phenobarbital, phenibut (to lower the threshold of sensitivity from external receptors).
- Since the patient has regurgitation syndrome associated with dyskinesia of the gastrointestinal tract due to dysregulation of pyloric muscle tone against the background of increased neuro-reflex excitability, it is necessary to prescribe neuroveget blockers (2% solution of diprazine, or aminazine at a dose of 1 mg / kg body weight, a single dose 2 times a day i / m). After feeding, keep the patient upright for 20-30 minutes to remove air from the stomach (aerophagy), prescribe an antireflux mixture for 2-3 weeks.

Case 25 **

The newborn is 9 days old.

Anamnesis data: born from the 1st, normal pregnancy, in term, with a body weight of 3050 g, 50 cm. The umbilical cord residue disappeared on day 4, and the umbilical wound healed quickly. The child had toxic erythema in the maternity hospital. Discharged from the maternity hospital on the 5th day with a body weight of 2,950 g. He was breastfed. There were small pustules on the skin of the mother's breast.

On the 6th day of the child's life, single pustules the size of a pinhead appeared on his face, filled with yellowish contents. The mother didn't think much of it. The child was not bathed.

Objective examination data: 3 days after discharge from the maternity hospital, the district pediatrician noted the presence of multiple pustules on the child's head, trunk, buttocks, and limbs. There were dried pustules with the formation of crusts on the face. The body temperature did not rise, the breathing in the lungs was clear, purulent, the number of breaths was 44 per minute. The heart tones are clear, pure, and the heart rate is 144’. The abdomen is soft, painless, the liver is + 2 cm, the spleen is not palpable. The breast sucks willingly, stools 3-4 times a day without pathological impurities.

Task:

1. Make a diagnosis.
2. Name the factors contributing to the development of this disease.
3. Which pathogen is most often caused by this disease?
4. Is it possible to bathe a child?

5. Prescribe a treatment.
The answer to problem 25:
1. Vesiculopustulosis. The diagnosis can be made based on medical history data.:
- The presence of small pustules on the skin of the breast (a possible cause of infection).
- The appearance on the 6th day of the child's life of single pustules the size of a pinhead, filled with yellowish contents (typical time of occurrence and localization).
- Objective inspection data:
- Multiple pustules on the head, trunk, buttocks, limbs, dried pustules with crusts.
- There are no symptoms of infectious toxicosis, which is typical for vesiculopustulosis.
2. - Decreased immune response due to low IdM content at birth, imperfect phagocytosis.
- Features of the newborn's skin: thin, vulnerable, the epidermis easily separates from the dermis, participates in the release of toxins from the body, incomplete protective function.
- Colonization by microorganisms of the newborn at birth with the formation of a normal ratio of dominant and subdominant flora (75-90% lactic acid: 25-10 conditionally pathogenic). The violation leads to pathological colonization with a predominance of conditionally pathogenic flora.
- Bacterial infection in the mother (pustules on the mammary gland).
3. Staphylococcus aureus, other cocci, opportunistic flora.
4. You can bathe with the addition of a solution of permanganate K (pale pink color) to the water and using baby soap.
5. Each element of the vesiculopustulosis should be opened with a sterile needle and treated with solutions of aniline dyes (brilliant green solution, gentian violet, Castelani paint, an aqueous solution of methylene blue), antibiotics are prescribed only for abundant rashes with an unfavorable premorbid background

Case 26
Boy 4.5 months old
Medical history data: a twin child from the 2nd pregnancy. The first pregnancy ended in a miscarriage. Delivery at the 30th week of pregnancy. Birth weight 1700 g, length 36 cm. He screamed at once. Artificial feeding. I did not receive complementary foods or juices. He gained weight satisfactorily. He was not ill. In the last 2 weeks, the mother began to notice that the child had become sluggish, drowsy, skin paleness had increased, and appetite had decreased.
Objective examination data: moderate condition. The skin and conjunctiva are pale, and the subcutaneous fat layer is well developed. Breathing is puerile, there is no wheezing. The number of breaths is 48 per minute. The heart tones are moderately muted. The heart rate is 154 per minute. The belly is soft, painless. The liver is palpated from under the edge of the costal arch by 3 cm, the spleen by 1.5 cm. The stool is regular.
Total blood count: er. – 3.2x1012/l, Hb – 70 g/l, color index –0.65, platelets – 250,000, leukocytes 5.6x109/l, C.I.-32, lymphocytes - 64, monocytes - 3, eosinophils.- 1, the ESR is 6 mm/hour.
Questions:
1. Which clinical form of anemia is most likely in this case:
2. What are the main causes of anemia in this child?
3. What indicators of serum iron are most likely in this case?
4. Should this child be prescribed iron supplements?
5. List the diseases that contribute to the development of anemia in infants.
The answer to case 26
1. Late anemia of premature babies. The baby was born at 30 weeks of pregnancy with a body weight of 1700 g and a length of 36 cm. In this case, in the absence of iron prophylaxis, iron deficiency anemia always develops due to insufficient iron deposition during pregnancy.
2. Multiple pregnancies, prematurity, artificial feeding, feeding defects (I did not receive juices and complementary foods).
3. Low serum iron levels.
4. As a result, it is necessary to prescribe iron supplements.

5. Prematurity, rickets, hypotrophy.

Case 27*

The girl was transferred to a children's hospital at the age of 9 days from the maternity hospital.
Medical history data. A child from 2 pregnancies (the 1st pregnancy ended with a medical abortion 7 years ago, the 2nd pregnancy is real). Labor on the 1st, at the 39th week, amniotomy, polyhydramnios, light waters, anhydrous period of 9 hours and 40 minutes.
The condition at birth is severe, the cry is very weak, the Apgar score is 3/5 points. Birth weight 3150 g, length 50 cm, pale yellow skin, swelling of limbs, trunk. In the lungs, breathing is puerile, there is no wheezing, the number of breaths is 50 per minute. The heart tones are muted, the heart rate is 158 per minute. The abdomen is enlarged, the liver is 7 cm below the costal arch along the mid-clavicular line, and the spleen is 6 cm below the rib. The stool is meconial, the urine is light yellow.
The mother has a B(III) Rh(-) blood type, the child has A(II) Rh(+). During pregnancy, the mother had a high titer of antiresus antibodies detected once (one month before delivery).
At birth, the child's total bilirubin is 185 mmol/l, hemoglobin is 40 g/l. At the 20th minute of life, a therapeutic measure was performed, after which the condition improved somewhat due to a decrease in edematous syndrome. However, the jaundice persisted, and in the first four days of life, a total of 5 such therapeutic measures were carried out. From the 7th day of life, jaundice began to decrease, edema decreased by the fifth day of life. On day 7, she had a weight of 2750 g, after that she began to gain weight gradually. The umbilical cord residue disappeared on the 7th day.
Objective examination data upon admission: body temperature 36.5 degrees, weight 2800, head circumference 33.5, chest 31 cm.
The condition is severe, the cry is quiet, there is lanugo on the shoulders and auricles, the umbilical ring is located low. The skin is icteric, dry, cyanosis of the nasolabial triangle, cyanosis of the feet, palms. Umbilical wound with serous discharge, there is swelling of the lower part of the trunk and limbs. The large fontanel is 1x1 cm. In the lungs, breathing is puerile, there is no wheezing. The number of breaths is 44 per minute. Heart tones are loud, systolic murmur is at the top, and the boundaries of relative cardiac dullness are within the age norm. The heart rate is 160 per minute. The abdomen is soft, the liver is +3 cm, the spleen is +1.5 cm. The stool is yellow, the urine is light. Motor activity is reduced, reflexes of newborns are reduced, an unstable symptom of Grefe.
The child is being artificially fed with an adapted 70 ml formula 7 times a day.
Complete blood count: Hb 116 g/l, er. 4.1x1012/l, platelets 143 x 109/l, Le -8.3x109/l, myel.-2, metamyel.-1, P.ya.-2, S.ya.-60, E.-1, L.-26, M.-7. cell size-1, ESR-4 mm/hour.
Blood biochemistry: protein 70 g/l, urea 4.2 mmol/L, cholesterol 3.8 mmol/L, direct - no bilirubin, indirect – 250 mmol/l.
Task:
1. Make a diagnosis.
2. What causes the severity of the child's condition?
3. Schedule a further examination.
4. Which treatment event was held in the hospital 5 times. Other methods of treating this disease?
5. Prognosis.
The answer to case 27
1. Edematous form of hemolytic disease of newborns.
Rationale: incompatibility of the Rh factor in the fetus and pregnant woman, high titers of antiresus antibodies, edema, enlarged liver, low hemoglobin, high indirect bilirubin.
2. The severity of the condition is due to a high level of total bilirubin 185 mmol / l, a low hemoglobin content of 40 g / l, as a result of which hypoxia of the newborn is noted with a low score on the Apgar scale of 3/5 points. Increasing anemia and hypoxia required a 5-fold replacement blood transfusion.

3. Examination plan: monitoring of hemoglobin, erythrocytes, indirect and direct bilirubin levels to monitor the rate of hemolysis and prevent the possibility of bilirubin encephalopathy), determination of the hourly increase in bilirubin, observation by a neurologist.
4. Replacement blood transfusion was performed 5 times in the hospital in order to compensate for the deficiency of red blood cells and hemoglobin. Phototherapy can be recommended for photochemically converting water-insoluble bilirubin into its water-soluble isomer, infusion therapy using colloids to bind and transport indirect bilirubin, as well as solutions
glucose for the energy supply of conjugation. The use of choleretic drugs is also justified in order to prevent bile thickening syndrome and intrahepatic cholestasis.
5. The prognosis is unfavorable, given that there remains a high rate of indirect bilirubin in a child with a severe form of hemolytic disease of the newborn (possibly intrauterine brain damage

5.1.3 Model assignments (assessment tool - Case-task) to assess the development of the competency ПК-2:

Case 1 **
A boy, 7 years old.
Complaints of paroxysmal cough, wheezing.
A boy from the first normal pregnancy, an urgent
delivery. Birth weight 3200 g, length 52 cm. The period of
newness without features. On artificial feeding since birth.
When eating raspberries, chocolate, eggs, rashes appear on the skin.
Family history: the child's mother has atopic dermatitis. At the age of 3 and 4, in May, the boy had suffocation attacks outside the city, which
they were treated on their own when moving to the city. The real attack occurred after eating raspberries. The emergency room doctor carried out emergency measures. The attack was stopped. The asset was transferred to the local doctor.
On examination: the condition is of moderate severity. The skin
is pale, blue under the eyes. There is dryness, peeling, and scratching on the cheeks, behind the ears, and in the natural
folds of the arms and legs. The tongue is "
geographical", jams in the corners of the mouth. Breathing is whistling, audible at
a distance. Exhalation is prolonged. BH — 38 in 1 min. Over the lungs percussion
a box—tinged sound, auscultation - a mass of dry wheezing
over the entire surface of the lungs. The boundaries of the heart are within the normal range. The tones are muted. Heart rate 70 beats/min.
The belly is soft, painless. Liver +2 cm from under the edge of the costal arch. The spleen is not palpable. The chair is daily, decorated.
Complete blood count: er. — $4.0x10^{12}$/L, Hb — 117 g/L, Le—
$5.8x10^{9}$/L, e -15%, n/I — 1%, s — 47%, L — 29%, m — 8%, ESR — 3 mm/
an hour.
General urinalysis: relative density — 1016, no mucus, Leucocytes 3-4, Erythrocytes 0.
Chest X-ray: increased pulmonary fields transparency, increased vascular pattern in the root zones, no focal shadows.
Task
1. Make a diagnosis.
2. Urgent measures in this case.
The answer to case 1
1. Atopic bronchial asthma, persistent, moderate
to severe, attack period. Gastrointestinal food
allergy. Atopic dermatitis, exacerbation.

2. Inhalation therapy: inhalation of bronchospasmolytics,
corticosteroids, mucolytics, seizure relief with an assessment
of the patient's condition 20 minutes after the
inhalation. If inhalation is ineffective, infusion therapy (euphyllin, prednisone) is used.

Case 2**
A 4-year-old child developed abdominal pain, nausea, and multiple loose stools,
with a temperature of up to 37.5 °C. The child's condition during the examination
is satisfactory, and his well-being does not suffer. The skin is moist,
of normal color, and salivation is sufficient. The tongue has
a whitish coating at the root. The mucous membrane of the oropharynx is moderately
hyperemic. The lymph nodes are not enlarged. Pathology of the lungs and cardiovascular system was not detected. The abdomen is moderately swollen, and rumbles on palpation. The liver is at the edge of the costal arch. The stool was examined by a doctor — liquid, light yellow, with white flakes.
Task
1. Make a diagnosis
2. What studies can be recommended in outpatient settings?
3. Prescribe a treatment.
5. What possible complications can be foreseen?
The answer to case 2
1. Infectious gastroenteritis, mild severity (probably of viral etiology).
2. Complete blood count, urinalysis. The coprogram. Three-time bacteriological analysis of feces for intestinal group. Stool ELISA for rotavirus antigen or express strip. 3. Take the epid. Please tell the parents the hygiene rules that must be followed when caring for a sick young child. 4. Mechanically and chemically sparing diet, exclusion of milk ; oral rehydration with hypoosmolar solutions (Humana-electrolyte, gastrolite, hydrolite) 1 liter of boiled water – 1 tsp salt without a slide + 6 tsp sugar without a slide For children under 5 years of age, half as much salt and sugar per the same volume of water. Solder off 2-3 tablespoons every 5 minutes at the rate of: The 1st stage is primary rehydration - replenishment of losses that occurred before seeking medical help, and is calculated for 6 hours. The total amount of liquid is 50-80 ml / kg for 6 hours 2-3 tbsp.l.every 5 minutes. After vomiting, do not give 1 hour The 2nd stage is supportive rehydration, which is the replenishment of current fluid losses during acute respiratory failure. 80-100 ml / kg of liquid is prescribed per day. The duration of the second stage of oral rehydration continues until recovery or indications for parenteral correction of dehydration appear. It should be borne in mind that the correction of dehydration is impossible without the use of salt-free solutions, among which preference should be given to drinking water (not mineral!), it is possible to use pectin-containing decoctions (apple compote without sugar, carrot-rice broth). The ratio of glucose-salt solutions to drinking water should be 1:1 for watery diarrhea, 2:1 for severe vomiting, 1:2 for invasive diarrhea. Smecta or other enterosorbent, enzymes, probiotics 5. Dehydration, development of intestinal dysbiosis, in rare cases intestinal invagination. The prognosis is favorable.

Case 3 ***
A girl, 3 months old. She was born on time, on natural feeding.
Mental and physical development correspond to age.
The child's father has had a cough in the last two weeks. According to the mother,
at a normal temperature, the child had a cough, which
worsened in the following days. A week later, the child was
hospitalized according to the severity of the condition with a diagnosis of "acute respiratory viral infections, pneumonia".
Upon admission: the condition is of moderate severity. The girl is pale.
Cough is paroxysmal, accompanied by cyanosis of the face, sometimes
with vomiting, discharge of thick, viscous sputum. It's hard in the lungs

breathing, wired wheezing. Heart tones are loud, tachycardia.
According to the internal organs, there are no special features.
At the end of the second week of the disease, the condition became severe.
His face was puffy, and cyanosis of the nasolabial triangle persisted
constantly. The cough worsened, became paroxysmal to 20-30
once a day with vomiting. Periodically, the child had
respiratory arrest, during which cyanosis appeared,
convulsions were noted several times. Then the temperature rose to 38.5 °C,
moist, bubbly wheezes began to be heard in the lungs, and
constant shortness of breath with retraction of the yielding places of the chest.
Heart tones are muted, heart rate is up to 160 beats/min. The child became
sluggish, restless at times.
Chest X-ray: pulmonary fields of increased
pneumatization, a large number of small focal shadows, especially in the basal and lower regions.
Total blood count: erythrocytes — 3.8 $x10^{12}$/l, hemoglobin —
108 g/l, leukocytes — 18.2 $x10^{9}$/l, color - 0.87, e — 5%, n/I — 5%,
s/I — 19%, L — 61%, m — 10%, ESR is 11 mm/hour.
Task
1. Make a clinical diagnosis.
2. What is the suspected source of the disease?
3. What laboratory tests are needed to clarify the etiology of the disease?
4. Are there any complications of the disease in the child?
5. Evaluate the results of the peripheral blood test.
6. In which department should the patient be treated?
7. Prescribe a treatment.
The answer to case 3
1. Whooping cough, typical, severe form. Multiple atelectasis.
2. The source of infection is the child's father.
3. PCR and ELISA diagnostics for whooping cough. Bacteriological
examination by the method of cough plates.
4. No.
5. A complete blood count is typical for whooping cough.
6. Observation and treatment in the Intensive Care Unit.
7. Medicines: antibiotics (macrolides), inhalation with berodual, lazolvan.

Case 4 ***
A 3-year-old boy became acutely ill. Within a few hours, the body temperature reached 40 ° C, there was difficulty breathing, sore throat. On examination, the child's condition is severe, the child is restless, the voice has not changed, swallowing any food, even saliva, is difficult and painful. Breathing by his open mouth, excessive salivation, inspiratory shortness of breath at rest with retraction of the supraclavicular pits, and increased shortness of breath when trying to put him to bed. The skin is pale. When examining the pharynx bright diffuse hyperemia. The submandibular lymph nodes are enlarged,
not soldered, and the skin above them is unchanged. Breathing is hard in the lungs,
it is carried out in all departments, there are no wheezes. The respiratory rate is 60 per minute.
The heart tones are loud, the rhythm is correct, the heart rate is 160 beats/min.
Task
1. Make a clinical diagnosis.
2. What causes the severity of the disease?
3. What is the algorithm of emergency care?
4. Features of transportation to the hospital.

5. What is the prevention of this disease?
The answer to case 4
1. Epiglottitis, severe form.
2. The syndrome of infectious toxicosis, a violation of the patency
of the respiratory tract due to an increase in the epiglottis due to inflammation determine the severity of the condition.
3. It is necessary to avoid or postpone activities that cause anxiety to the child (venipuncture, lying on his back, etc.), which can lead to sudden respiratory arrest!
At the prehospital stage, you should not try to examine the larynx! Give antipyretics. Parenterally administered inhibitor-protected aminopenicillins, cephalosporins of the third generation. Humidified oxygen is supplied. The child should be under the supervision of a doctor who has the skills
of tracheotomy, conicotomy and intubation.
4. Transportation in a sitting position.
5. Immunization with Act Hib, Hiberix, Pentaxime, Infanrix-hexa vaccines is the prevention of infection caused by hemophilic bacillus.

Case 7***
The child is 3 months old, sick for the second day: difficulty in nasal
breathing, excessive mucous discharge from the nose, rare dry
cough, temperature 37.5 °C. From the third day of the illness, the condition worsened, the cough became obsessive, shortness of breath appeared and quickly
increased to 80 in 1 minute, the temperature was 37.3 °C. The child's mother
went to an ambulance.
Upon examination of the child by the SMP doctor, the condition was assessed as severe.
The skin, mucous membranes of the lips and oral cavity are cyanotic.
Breathing is noisy, "puffing", shallow, with difficulty
exhalation and participation of auxiliary muscles in the act of breathing,
with inflating of the wings of the nose, retraction of the supraclavicular pits and interstitial
spaces. Well-being suffers to a lesser extent.
The chest is swollen, above the lungs there is a boxy tinge
of percussive sound, the boundaries of cardiac dullness are reduced, the upper
boundaries of the liver and spleen are shifted down by one intercostal space.
During auscultation, breathing is harsh, exhalation is sharply prolonged, and on inhalation
and exhalation, a mass of finely
bubbly and crepitating wheezes is heard from both sides from the front and back. Heart tones are sonorous, frequency
heart rate 172', I-tone accent over the pulmonary
artery. The boundaries of the heart correspond to age. Other organs
and systems during physical examination without special features.
Task
1. Make a preliminary diagnosis.
2. What syndrome causes the severity of the condition?
3. Determine the indications for hospitalization.
4. What additional research methods should be recommended?
5. Prescribe a treatment.
6. What is the prevention of the disease?
The answer to case 7
1. Bronchiolitis, severe form. Respiratory failure 2.
2. Bronchial obstruction syndrome.
3. Hospitalization is indicated due to the severe condition

of the patient and the presence of bronchial obstruction.
4. Pulse oximetry, general blood analysis, chest X-ray.
5. Oxygen therapy through nasal catheters or head packs, moistening, hydration, superficial nasal aspiration, spraying of 3% hypertonic solution through a nebulizer, berodual - 1 drop / kg, in the absence of the effect of berodual inhalation, stop.
6. Breast-feeding, exclusion of secondhand smoke, disinfection of hands, palivizumab (according to indications).

Case 9 **

Girl, 5 years old, constipation is noted from the first year of life, during the last year, stool occurs after 4-5 days, mainly after a cleansing enema, self-defecation is rare, difficult, incomplete. For 6 months encoprese is observed.

The child was full-term, the second in the family, artificial feeding from 2.5 months, was observed by a neurologist with a diagnosis of increased neuro-reflex excitability syndrome.

At the age of 3, she suffered an intestinal infection of unknown etiology.

The mother is 38 years old and suffers from constipation. Father is 40 years old, healthy; the brother is 13 years old, healthy.

Examination: weight 16 kg, height 105 cm, pale pink skin, blue under the eyes, swollen abdomen, painful along the colon, sigma dilated, thickened, fecal stones. Liver + 1.5 cm below the edge of the costal arch, slightly positive vesicular symptoms. There are no changes in other organs.

General blood test: er — 4.0x1012/L, Hb — 118 g/L, Le — 6.2 x 109/L, e — 4%, n/I — 3%, s/I — 47%, L — 40%, M — 6%, ESR — 11 mm/hour.

General urinalysis: color — light yellow, relative density of urine — 1018, protein — no, sugar — no, ep.pl. — a small amount, er. — no, mucus — a little.

Coprogram: dark brown color, well—formed; muscle fibers — in small quantities; intracellular and extracellular starch — a lot, iodophilic flora — a significant amount, indigestible vegetable fiber — a little, mucus - a lot, leuc. — 1-2 per day.

Irrigography: the colon is hypotonic, the sigmoid is significantly elongated and dilated. The rectum is wide in diameter, hypotonic, and on examination, a small portion of barium is excreted from the anus. Emptying from the intestine is incomplete, the pattern of the colon mucosa is rearranged, smoothed, and gaustation in the distal the colon is poorly expressed.

Task

1. What kind of pathology can you think about?
2. Encopresis primary or secondary?
3. Treatment plan.

The answer to case 9

1. Dolichosigma. Chronic colitis in the acute stage. Encopresis.
2. Secondary encopresis.
3. Treatment plan: repeated cleansing enemas with salt water (1 tablespoon of table salt per 1 liter of water at room temperature, 200-500 ml of solution should be administered in the enema) until complete emptying of the colon within a few days (before relief of endocopresis). Microclysms "Microlax" allowed from birth, but it is an emergency medicine, not long-term use, has an irritating effect on the intestinal mucosa).

Then treatment with lactulose or macrogol preparations.

Phase 1 – increasing the dose.

The child is given lactulose or macrogol once a day in an increasing dose until mild diarrhea appears (type 5-6 on the Bristol Stool Scale).
Phase 2.
The child takes a laxative for several months in a dose, maintaining a soft stool. During this time, the rectum, which is no longer stretched by dense feces, becomes toned, the child weans off the association defecation = pain, and during this time the child adapts to the defecation regime: every time after breakfast or after dinner.
Phase 3 – gradual dose reduction.
The drinking regime is 1000 ml per day. To introduce dietary
fiber into the diet (gray cereals, stewed vegetables, dried apricots, prunes, in-
fat). Abdominal massage, physical therapy.

Case 10 ***
A boy, 7 years old, became acutely ill tonight.
The temperature rose to 38 °C, abdominal pain appeared. I had
vomiting once, loose stools with mucus. The ambulance took
him to the infectious diseases department with suspected dysentery. On examination, the patient's forced position on his right side with his legs pulled up to his stomach, and a pained expression on his face. The skin is pale, the tongue is dry, covered with a thick coating, slight pharyngeal hyperemia. In the lungs, breathing is vesicular, and the heart tones are distinct.
Palpation of the abdomen determines soreness and muscle tension.
abdominal wall, a positive symptom of Shchetkin-Blumberg.
The stool in the emergency room is liquid, with an admixture of mucus.
task
1. Make a preliminary diagnosis.
2. Your medical tactics.
The answer to case 10
1. Acute appendicitis.
2. Immediate admission to the surgical department.

Case 12***
A boy from healthy parents was admitted to the clinic at the age of 1 month and 11 days.
Anamnesis data: Pregnancy 1, proceeded without complications. The birth is urgent, independent. Body weight at birth is 3550 g, body length is 52 cm. He took the breast well, sucked actively. In the 1st month of his life, he gained 700 g in weight.
At the age of 1 month and 7 days, profuse vomiting suddenly appeared, which was repeated daily 3-4 times a day. After 2 days, constipation and decreased urination appeared.
Objective examination data: the condition of the child upon admission to the clinic of moderate severity. Calm, sucking greedily. There is abundant vomiting from the fountain. The weight deficit is 16%. The skin is pale pink, dry. There is a decrease in the subcutaneous fat layer and tissue turgor. In the lungs, breathing is puerile, there is no wheezing. The breathing rate is 40 per minute. The tones of the heart are clear and loud. The heart rate is 140 per minute. The stomach is well-shaped. In the epigastric region, gastric peristalsis in the form of an hourglass is clearly visible. A thickened pylorus the size of a plum stone is palpated. The number of urinations is 7 times a day.
Biochemical blood test: serum protein – 75.2 g/l, blood pH - 7.60, VE - + 8.5 mEq/L, SB -31.2 mEq/L, pCO2 - 31 mmHg.
X-ray of the gastrointestinal tract with barium revealed an enlarged stomach and revealed a barium retention of more than 24 hours.
Task:
1. Make a diagnosis.
2. What are the symptoms characteristic of this disease?

3. Does the child need additional research methods to clarify the diagnosis?
4. Specify the treatment strategy.
5. How and with what to feed such a patient?
The answer to problem 12
1. Congenital pyloric stenosis.
The diagnosis is made on the basis of medical history data.:
- Profuse, repeated vomiting in a fountain at the age of 1 month. 7 days, with simultaneous absence of bowel movements, which may indicate a high intestinal obstruction. Before that, the child ate well, gained 700 g in weight.
Objective inspection data:
- Symptoms of hypotrophy and exsicosis: a 16% body weight deficit, a decrease in the thickness of the subcutaneous fat layer and tissue turgor, dry skin, thirst (sucks greedily).
- Segmental peristalsis of the stomach in the form of an hourglass is visible (a symptom characteristic of pyloric stenosis).
- A thickened pylorus the size of a plum stone is palpated (hypertrophy of the muscular layer of the pylorus).
Laboratory and instrumental research data:
- "Blood clot" syndrome - an increase in protein levels (associated with a decrease in BCC),
- Decompensated metabolic alkalosis (a characteristic change in blood glucose due to a large loss of gastric juice and acid bases with vomiting).
- An increase in the size of the stomach and retention of the barium mixture in the stomach for more than 24 hours (which is typical for pyloric stenosis). A barium retention of more than 8 hours may already indicate a high intestinal obstruction, possibly associated with a malformation of the pyloric part of the stomach.
2. The symptoms are listed in paragraph 1.
3. In this case, the diagnosis is clear and does not require additional examination, however, a child in need of surgical treatment is shown:
- A general blood test with hemosyndrome (platelets, clotting time, bleeding time).
- Biochemical blood test with mandatory determination of urea, electrolytes, protein.
- Chest X-ray (thymomegaly).
- neurosonography (ultrasound examination of the brain through a large fontanel), to exclude pathology associated with birth trauma.
- Electrocardiography.
- Esophagogastroduodenoscopy is possible if no radiopaque examination of the gastrointestinal tract has been performed.
4. Surgical treatment, Fred-Ramstedt pylorotomy with mandatory preoperative preparation (correction of water and electrolyte disorders).
5. Before surgery, fractional feeding with breast milk or an adapted mixture of 20-30 ml every 2 hours, the necessary energy and water needs are provided by infusion therapy, after surgery, feeding begins after 4 hours, 10 ml every 2 hours, daily the amount of milk in feeding is increased by 10 ml. Usually, the amount of nutrition is adjusted to the age norm in 10 days (with an uncomplicated course of the postoperative period).

Case 14 **
A 9-year-old girl
She has been ill for 2 months. After suffering from acute respiratory viral infections, the girl began to complain of thirst, increased appetite, weight loss, and frequent urination. 5 days before the hospitalization, the condition deteriorated sharply, abdominal pain, vomiting, drowsiness, and the smell of acetone from the mouth appeared. On the eve of hospitalization, shortness of breath, repeated vomiting with abdominal pain, and constipation appeared.
Anamnesis data: a child from the 2nd, normal pregnancy and normal birth. Body weight at birth is 3500 g, length is 50 cm. She grew and developed satisfactorily. Previous illnesses: acute respiratory viral infections 2

times a year, chickenpox at the age of 6. Vaccinations are made according to age. My maternal grandmother has type 2 diabetes.
Objective examination data. Upon admission, the condition is severe: severe weakness, sleeps, but when contacted, answers monosyllabic questions and immediately falls asleep. The skin is dry, and the turgor of the tissues is reduced. Dyspnea. Harsh breathing during auscultation. Tachycardia, heart sounds are muffled. Blood pressure is 90/50 mmHg. The pillar. The abdomen is painful on palpation. Liver + 1.5 cm from under the costal arch. Urination is frequent, and the vulva is hyperemic.
Examination data: Blood sugar 30 mmol/l, Sugar in urine (300 ml) 5%, acetone ++++, CBS: PH 7.1, VE – (-20).
Task
1. Make a diagnosis.
2. Continue the examination.
3. Prescribe treatment.
4. Substantiate the phase of the disease.
5. Give an assessment of the CBS indicators.
Answers to case 14
1. Type I diabetes mellitus, familial, grade II ketoacidotic coma, vulvitis.
Rationale: thirst, increased appetite, weight loss, frequent urination, dry skin, acetone odor from the mouth, progressive increase in these symptoms, drowsiness, vomiting, inactivity, shortness of breath, abdominal pain, enlarged liver, vulvar hyperemia, blood sugar 30 mmol / l, acetone in urine ++++, Grandmothers have diabetes mellitus, which is typical for type 1 diabetes.
Constipation, repeated vomiting, shortness of breath, abdominal pain, severe weakness, and metabolic decompensated acidosis are characteristic of grade II diabetic ketoacidotic coma.
2. Blood sugar tests every 3-4 hours, glucosuric profile, CBS every 3-4 hours biochemical blood analysis (protein and fractions, urea, cholesterol, lipoproteins, bilirubin, transaminases, electrolytes), ECG.
3. Infusion therapy: 5-10% glucose + saline solution, 4-5% K chloride solution, panangin, heparin, vitamin C.
4. Constipation, repeated vomiting, shortness of breath, abdominal pain, severe weakness, metabolic decompensated acidosis are characteristic of diabetic ketoacidotic coma of the II degree.
5. Decompensated metabolic acidosis (pH – 7.1, VE-(-20).

Case 15**
The girl, 12 days old.
Anamnesis data: a child from the 1st, normal pregnancy, from an urgent delivery. Birth weight 3600, length 52 cm. She screamed immediately, was put to her chest after 12 hours, and sucked actively. The parents are young and healthy. Heredity is not burdened.
At birth, attention was drawn to the irregular structure of the external genitalia: the labia majora resembled a scrotum, and the clitoris was hypertrophied. After being discharged from the 8th day of life, the child began vomiting, which has intensified in recent days, the girl began to refuse to feed, noticeably lost weight.
Objective examination data: the condition is severe, sluggish, vomiting continues, tissue turgor is reduced, the skin is dry, pigmentation in the nipple area. The large fontanel is sunken. Breathing is harsh. The heart tones are moderately muted. The abdomen is soft, with slight pain in the epigastric region. The stool is diluted 1 time. Urination is rare.
Survey data: Biochemical blood test: total protein 65 g/l, urea 6.4 mmol/L, cholesterol 4.2 mmol/L, total bilirubin 4 mmol/L, potassium 6.8 mmol/L, sodium 129.0 mmol/L, Ca 2.4 mmol/L, AlT – 20 Units/l.
Task
1.Make a dignosis
2. What indicator confirms the diagnosis?
3. Prescribe treatment.
4. Make a differential diagnosis
5. Prognosis in case of incorrect diagnosis of this disease.

Answers to case 15
Congenital dysfunction of the adrenal cortex, a losing form. The clinic notes an irregular structure of the genitals (labia majora resemble a scrotum, the clitoris is hypertrophied, pigmentation around the nipples). Vomiting, exsicosis are noted, hyperkalemia and hyponatremia were detected in a biochemical blood test.
2. To confirm the diagnosis, it is necessary to determine 17-hydroxyprogesterone in the blood.
3. Glucocorticoids and mineral corticoids are prescribed to correct the hormonal profile.
4. The wasting form of congenital adrenal cortex dysfunction should be differentiated from pyloric stenosis.
5. With late treatment, children tend to remain stunted for life.

Case 19 *
A 7-year-old girl was admitted to the hospital complaining of pain in the lumbar region and frequent urination.
Medical history data: a child from the first pregnancy, was born on time. The neonatal period was uneventful. She suffered from chickenpox and rubella from childhood infections. He often suffers from acute respiratory viral infections.
The girl is periodically bothered by abdominal pain; her temperature often rises; sometimes painful urination is noted.
Objective examination data: upon admission to the hospital, the condition is of moderate severity. The skin is pale, the temperature is 38 ° C. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 30 per minute. The tones of the heart are clear and loud. The heart rate is 88 per minute. Pasternatsky's symptom is positive on both sides. Urination is frequent and painful.
Survey data:
Total blood count: Hb - 114 g/L, er - 4.5x 1012/L, leuc. - 18.5 x 109/L, n/I - 10%, s - 70%, L - 22%, m - 9%, ESR - 30 mm/hour.
General urinalysis: alkaline reaction, protein 0.06, white blood cells – completely in the field of vision, red blood cells – 0-1 in the field of vision, bacteria - a lot.
Kidney ultrasound: the kidneys are positioned correctly, the size of the left kidney is larger than normal. The cup-pelvis system is expanded on both sides, more on the left. Suspected doubling of the left kidney.
Task
1. Make a diagnosis and justify it.
2. Specify additional research methods to clarify the diagnosis.
3. What is the purpose of cystography?
4. What kind of research should be conducted to prescribe adequate therapy?
Answers to case 19
1. Secondary chronic pyelonephritis on the background of abnormal kidney development, the stage of exacerbation. - Chronic, as there is a history of repeated fever, combined with abdominal pain and painful urination - Secondary, because ultrasound revealed an expansion of the collecting systems of both kidneys and a suspected doubling of the kidney on the left (developmental anomaly) - Pyelonephritis is in the acute stage, because in the anamnesis and upon admission there are phenomena of general infectious toxicosis, a positive symptom of Pasternatsky, pronounced leukocyturia and bacteriuria, an inflammatory reaction of peripheral blood
2. Microbiological examination of urine (microflora typing taking into account sensitivity to antibiotics), Zimnitsky urine analysis (pyelonephritis is characterized by a moderate restriction of the concentration ability of the kidneys), cystography, cystoscopy according to indications, nephroscintigraphy 6 months after the relief of pyelonephritis attack (the presence of foci of renal parenchyma wrinkling in a child with a chronic inflammatory process)
3. According to ultrasound (enlargement of the collecting kidney system), the presence of vesicoureteral reflux cannot be excluded.
4. Determination of the sensitivity of microflora to antibiotics (antibioticogram)

Case 20 *

A 5-year-old girl was admitted to the hospital complaining of swelling.
Anamnesis data: a child from the first normal pregnancy, delivery on time. Birth weight 3300 gr., length 52cm. Physical psychomotor development without special features. Previous illnesses: chickenpox, often has acute respiratory viral infections. Allergic history: atopic dermatitis up to 3 years old.
After suffering from acute respiratory viral infections, the girl developed swelling on her face and rare urination. The district doctor diagnosed Quincke's edema and prescribed suprastin (chloropyramine). Despite the ongoing therapy, the swelling increased, and the girl was hospitalized.
Physical examination: upon admission to the hospital, the condition is severe. The skin is pale. Pronounced swelling of the face, lower leg, feet, anterior abdominal wall, ascites. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 34 per minute. The heart tones are muted. Pulse is 110 beats per minute, blood pressure is 90/60 mmHg. The abdomen is soft and painless. Liver +2.0 cm from under the edge of the costal arch. He rarely urinates. She excreted 180 ml of urine per day.
- In the urine analysis, protein 8.0 0/00, leukocytes 2-3 in the field of vision, red blood cells are absent.
- Complete blood count: Hb - 127 g/L, ER - $3.8x10^{12}$/L, Le 10.2 $x10^{9}$/L, n 1%, s 36%, L 54%, e - 2%, m - 8%, ESR - 50 mm/hour.
Task
1. Make a diagnosis
2. Justify the diagnosis.
3. What biochemical blood parameters are necessary to clarify the diagnosis?
4. Diet for this disease
5. Prescribe a treatment.
Answers to case 20
1-2.Acute glomerulonephritis with nephrotic syndrome (idiopathic nephrotic syndrome).
Preschool age, the onset of the disease after acute respiratory viral infections, severe edematous syndrome, oliguria, massive proteinuria, and accelerated ESR are typical of nephrotic syndrome (morphologically, it is most likely a disease of minimal changes)
3. Total protein and protein fractions (pronounced hypoproteinemia in combination with hypoalbuminemia can be expected), lipidogram (compensatory increase in cholesterol and triglycerides).
Elevated urea, creatinine, and blood electrolytes (hyperkalemia is possible) may indicate the development of acute renal failure.
Coagulogram (tendency to hypercoagulation)
4. Exclusion of salt and meat (contains sodium chloride), protein restriction (with massive proteinuria), fluid intake in accordance with diuresis and the patient's desire.
5. Bed rest for the period of severe edema, then do not limit physical activity (prevention of osteoporosis)
- Diet (see above),
- Short-course antibacterial therapy for the period of severe edema (prevention of bacterial complications-pneumonia, peritonitis with anasarca).
- Immunosuppressive therapy – prednisone 2 mg / kg or 60 mg/ m2 of body surface area for 6 weeks daily, followed by a switch to an alternating regimen of 1-1.5 mg / kg or 40 mg / m2 for 6 weeks, followed by gradual withdrawal with normal urine tests.
- Anticoagulants, antiplatelet agents (heparin, curantil) to prevent microthrombosis in severe hypovolemia
- Diuretics - extremely careful administration of loop diuretics against the background of adequate hydration of the patient (intravenous drip of rheopolyglucine followed by slow administration of lasix 1-5 mg / kg in 150 ml of glucose)
- In the future, proton pump inhibitors (side effects of corticosteroids on the gastrointestinal tract)

Case 21 **
The girl, 11 years old.

Medical history data: from the 2nd pregnancy, delivery in term. The neonatal period was normal. After 1 year, the child periodically had a rash and Quincke's edema after ingestion of eggs, chocolate, oranges. He often suffers from acute respiratory viral infections.
She suffered from follicular tonsillitis 15 days before her hospitalization. She received antibiotic treatment and drank a lot, including orange juice. On the 14th day of the illness, the child developed pain in the ankle joint and a rash on his legs.
Physical examination upon admission: on the shins, thighs, buttocks, symmetrical, more on the extensor surfaces and around the joints, there is an abundant exudative hemorrhagic rash. The ankle joints are swollen. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 20 per minute. The tones of the heart are sonorous. The pulse rate is 80 per minute. Blood pressure is 110/60 mmHg. The abdomen is soft and painful on palpation around the navel, at the point of the gallbladder. The stool was after the enema, decorated, with a small amount of mucus.
The formula of sexual development: Ma2, P2, A2, Me0.
- Blood test: Hb-126 g/l, er.-4.0x10^{12}/l, Pt -322x10^{9}/l, Le 7.4x10^{9}/l, p-6%, s-64%.eos.-8%, L.-18%.m-4%, ESR-24 mm/hour.
The bleeding time according to Duque is 3 minutes, the clotting time according to Burger: the beginning is 1 minute, the end is 3 minutes.
Task
1. Make a diagnosis.
2. What clinical syndromes are characteristic of this disease?
3. The examination plan.
4. Treatment plan.
5. What factors could contribute to the development of the disease?
Answers to case 21
1. Hemorrhagic vasculitis with skin, joint and abdominal syndrome. The diagnosis is based on anamnesis (food allergy to eggs, chocolate, citrus fruits). This disease developed 2 weeks after suffering a sore throat. In the clinic of this child's disease, typical manifestations on the skin are exudative hemorrhagic rash on the thighs, lower buttocks, soreness and swelling of the ankle joints, cramping abdominal pain typical of abdominal syndrome.
2. a) cutaneous, b) articular, c) abdominal, d) renal
3. a) Blood test + bleeding time and clotting time, b) coagulogram, c) stool for coprology,
d) urinalysis e) biochemical blood analysis (protein and its fractions, urea, creatinine, potassium, sodium)
4. a) Diet 1
b) detoxification therapy, c) heparin therapy, d) desensitizing therapy
e) rehabilitation of foci of infection.
5. a) allergic potential of the body (exudative diathesis, food allergy),
b) frequent acute respiratory viral infections, c) follicular sore throat suffered in 2 weeks.

Case 23**
A 3-month-old child was admitted to the hospital with complaints of vomiting, frequent loose stools, and refusal to eat.
From the anamnesis of life: a child from 1 normal pregnancy. Delivery on time, physiological. He screamed at once. Birth weight 3300, length 51 cm. The newborn period proceeded smoothly. She has been on artificial feeding since 1 month due to hypogalactyly in her mother. It feeds on an adapted mixture, by the hour – 6 times a day and sucks 130-140 g. From 2 months it receives juices, before illness – 30.0 ml. A few days ago, they began to give cottage cheese for 5 g.
He gained weight: for the 1st month - 600 g., for the 2nd – 800 g., for the 3rd - 750 g. He holds his head for 2 months, watches his eyes, hums. I haven't been ill until now.
Epidemiological history: there were no acute gastrointestinal diseases in the family. Medical history: became acutely ill, fever increased to 37.5, vomiting appeared, loose stools up to 10 times on the first day of the disease.

Upon examination by the district pediatrician: the temperature is normal, the state of health is slightly disturbed. The stool was examined – mushy, with an abundant admixture of mucus and greenery. When the mother was questioned, it turned out that she had made cottage cheese from kefir the day before and for the first time gave the child 20 g. It was recommended to pause feeding for 6 hours and reduce the feeding dose by half, and give the baby a drink of slightly sweetened weak tea. Over the next 2 days, the child's condition continued to deteriorate; he had a temperature of 37.2-37.5, vomiting up to 3-5 times a day, and stool increased up to 20 times. He was re-examined by a doctor and hospitalized.

Clinical examination data: temperature 37.0. The child's condition is very severe, sluggish. The scream is almost soundless, weak. Motor-inactive. The skin is pale, with a “marble” pattern, slightly moist to the touch. The turgor of the tissues is sharply reduced. The skin on the inner thigh gathers into a fold. The large fontanel sinks in. The facial features are pointed. The breathing rate is 40-45 per minute. There were no respiratory abnormalities. The pulse rate is 150 beats per minute, the heart tones are slightly muffled. Sucks sluggishly, reluctantly. It does not suck out more than 30 ml. Vomiting occurs when trying to give more. The tongue is covered with a whitish coating, but moist. The abdomen is swollen, and rumbling is pronounced on palpation. There is a painful reaction to palpation of the abdomen. The liver protrudes from under the edge of the costal arch by 2 cm. The spleen is not palpable. Stools for the first day of stay in the department up to 20 times, liquid with an admixture of mucus and greenery, with a small amount of feces. The anus opens easily when the buttocks are dilated.

Urination up to 5-6 times a day, in small portions.

In the neuropsychiatric status: sluggish, muscle tone is reduced, tendon reflexes are alive. He reacts to the examination with a weak cry.

Blood test: Hb-140 g/l, er. -5.0x1012 , leuc. – 15x109 , Pt. -15%, S.I. -55%, L. – 25%, M. – 5%, ESR – 20 mm/hour.

2. Blood: pH – 7.32, pCO_2 – 35, VE – (-) 7.0

3. Biochemical blood test: total protein – 70.0 g/l, sodium – 128 mmol/L, potassium – 4.0 mmol/L.

Task

1. Identify the main clinical syndromes in the clinical picture of the patient's disease.
2. What are the most likely causes of the disease in our patient?
3. What is the main reason for the severity of the patient's condition, and what causes it?
4. Upon admission, the child was weighed, and his body weight turned out to be 5,000 g.

a) what is the degree of exicosis?

b) what is the likely type of dehydration in this patient, indicate typical clinical and laboratory signs?

5. Formulate a detailed diagnosis of our patient's disease at this stage of his examination.
6. Name the main directions of treatment measures for this patient.
7. To restore water-salt metabolism:

a) determine the total amount of fluid per day needed by this child to eliminate dehydration.

b) what components will this estimated amount of fluid consist of for this child on the first day of treatment,

c) list the therapeutic solutions needed for infusion therapy of this patient.

Answers to case 23

1. The child has the following syndromes: - infectious toxicosis, - exsicosis, - regurgitation and vomiting.
2. The most likely cause of the disease is an intestinal infection, however, it must be remembered that consuming kefir in such large quantities can lead to functional dyspepsia. In the future, it is necessary to make a differential diagnosis between them using additional clinical and laboratory data.
3. The main cause of the severity of the condition is associated with the syndrome of regurgitation and vomiting, which is primary, infectious toxicosis, exicosis, metabolic disorders are associated with loss of fluid and electrolytes directly due to dyspeptic disorders.
4.

a) body weight deficiency is defined as follows: the proper body weight at this age is:

3300+600+800+750=5450 G. We know the actual body weight At admission, the child's weight turned out to be

5000 g. This means that in 3 days the child lost 5450-5000 = 450 g 450x100: 5450= 8.26%, which corresponds to grade II exicosis.
b) hypotonic type of exsicosis (lethargy, adynamia, decreased muscle tone, tachycardia, deafness of heart tones, low serum K levels).
5. Intestinal infection of unknown etiology, intestinal toxicosis with grade II exicosis, hypotonic type.
6. Unloading of food: an introductory tea break for 8-12 hours, then an adapted low-lactose mixture (fermented milk) - fractional meals of 20-30 ml every 2 hours 10 times a day. Fractional rehydration with Rehydrone, given the presence of repeated vomiting in very small amounts.
- Etiotropic therapy: parenteral cephalosporins, oral aminoglycosides.
- Pathogenetic therapy: correction of water and electrolyte disorders – rehydration infusion therapy with glucose-saline solutions, polarizing mixture (glucose-insulin-potassium mixture), fight against acidosis.
- The second stage is the use of bacteriophages, probiotics, and enzymes.
7. The total amount of fluid is about 190-200 ml / kg of body weight.
Necessary components:
- Colloidal solutions: plasma, 10% albumin solution, rheopolyglucine,
- Crystalloid solutions: 10% glucose solution, Ringer's solution, saline solution, 4-5% potassium chloride solution, B vitamins.

Case 24 **
The boy is 2 months old.
Medical history data: a child from 4 pregnancies to 2 births. The previous pregnancy ended with a medical abortion. The real pregnancy occurred 6 months after the abortion. Course: toxicosis of the 2nd half (nephropathy with edema and proteinuria, in the 3rd trimester she suffered from influenza with symptoms of infectious toxicosis).
Birth at 40 weeks, spontaneous, early discharge of amniotic fluid (10 hours before the rest period), green, cloudy waters. The duration of labor is 4 hours. The child screamed immediately, was applied to the breast for 3 days, took the breast badly, sucked sluggishly. The Apgar score is 7/8 points. Birth weight 4500, length 54 cm. Physiological weight loss - 250 g, by the time of discharge from the hospital, the weight had not recovered. From the moment of birth, there was at first an abundance of regurgitation, and at the time of hospitalization - after almost every feeding.
The data of an objective examination in the admission department: age 2 months, the child is restless, blushes when screaming, there is a tilting of the head and tension of the large fontanel. After adapting to the examination, he calmed down and reacts with positive emotions. The head is dolichocephalic in shape with an overhanging occiput, the seams are not closed, a large fontanel 2x2 cm, slightly tense. Moderate chin tremor, clonus of the lower extremities, expansion of the tendon reflex zone. Grefe's symptom is determined.
1. A presumptive diagnosis?
2. What diseases should be differentiated from?
3. The optimal examination plan?
4. Treatment program?
The answer to problem 24:
1. The child has a perinatal CNS lesion of hypoxic origin with intracranial hypertension syndromes, increased neuro-reflex excitability, regurgitation syndrome. The diagnosis can be established on the basis of medical history data.:
- This pregnancy occurred a short time after the abortion.
- Burdened pregnancy (nephropathy, infectious diseases with symptoms of toxicosis).
- Early discharge of amniotic fluid, they are green, cloudy (signs of chronic intrauterine hypoxia).
- Rapid delivery (duration 4 hours).
- Low score on the Apgar scale (8/9 is acceptable, 9/10 points are ideal)
- Large fetus (the combination of rapid delivery and large fetus creates the prerequisites for hypoxic-traumatic damage to the central nervous system)

Objective inspection data:
Restlessness, tilting of the head and tension of the large fontanel (a sign of intracranial hypertension), overhanging occiput (a sign of intrauterine hypoxia), chin tremor, clonus of the lower extremities, expansion of tendon reflexes (a sign of increased neuro-reflex excitability), Grefe's symptom (a sign of intracranial hypertension).
2. In all cases of intracranial hypertension, especially with tension of the large fontanel, tilting of the head, symptoms of hyperesthesia, it is necessary to make a differential diagnosis.:
- With meningitis - With intracranial hemorrhage - With neurotoxicosis (especially if there are signs of infection).
3. General blood test (to exclude bacterial infection).
Biochemical blood test (electrolytes, protein).
Neurosonography (ultrasound examination of the brain through a large fontanel).
Fundus examination (changes with severe intracranial hypertension)
Consultation with a neurologist
When symptoms of infectious toxicosis are added, a lumbar puncture (diagnostic and therapeutic measure) is indicated.
4. If it is not meningitis or subarachnoid hemorrhage, then all therapeutic measures are aimed at establishing a balance between the production and outflow of cerebrospinal fluid, therefore they are prescribed:
- Diuretics that selectively reduce the formation and increase the outflow of cerebrospinal fluid (diacarb at an initial dose of 60 mg in the morning according to the scheme -3 days to give, day break). Glycerol.
- Asparkam, panangin (to compensate for the resulting deficiency of K and magnesium).
- Glycine (to improve metabolic processes in the brain
- Sedative drugs: phenobarbital, phenibut (to lower the threshold of sensitivity from external receptors).
- Since the patient has regurgitation syndrome associated with dyskinesia of the gastrointestinal tract due to dysregulation of pyloric muscle tone against the background of increased neuro-reflex excitability, it is necessary to prescribe neuroveget blockers (2% solution of diprazine, or aminazine at a dose of 1 mg / kg body weight, a single dose 2 times a day i / m). After feeding, keep the patient upright for 20-30 minutes to remove air from the stomach (aerophagy), prescribe an antireflux mixture for 2-3 weeks.

Case 25 **
The newborn is 9 days old.
Anamnesis data: born from the 1st, normal pregnancy, in term, with a body weight of 3050 g, 50 cm. The umbilical cord residue disappeared on day 4, and the umbilical wound healed quickly. The child had toxic erythema in the maternity hospital. Discharged from the maternity hospital on the 5th day with a body weight of 2,950 g. He was breastfed. There were small pustules on the skin of the mother's breast.
On the 6th day of the child's life, single pustules the size of a pinhead appeared on his face, filled with yellowish contents. The mother didn't think much of it. The child was not bathed.
Objective examination data: 3 days after discharge from the maternity hospital, the district pediatrician noted the presence of multiple pustules on the child's head, trunk, buttocks, and limbs. There were dried pustules with the formation of crusts on the face. The body temperature did not rise, the breathing in the lungs was clear, purulent, the number of breaths was 44 per minute. The heart tones are clear, pure, and the heart rate is 144’. The abdomen is soft, painless, the liver is + 2 cm, the spleen is not palpable. The breast sucks willingly, stools 3-4 times a day without pathological impurities.
Task:
1. Make a diagnosis.
2. Name the factors contributing to the development of this disease.
3. Which pathogen is most often caused by this disease?
4. Is it possible to bathe a child?
5. Prescribe a treatment.
The answer to problem 25:

1. Vesiculopustulosis. The diagnosis can be made based on medical history data.:
- The presence of small pustules on the skin of the breast (a possible cause of infection).
- The appearance on the 6th day of the child's life of single pustules the size of a pinhead, filled with yellowish contents (typical time of occurrence and localization).
- Objective inspection data:
- Multiple pustules on the head, trunk, buttocks, limbs, dried pustules with crusts.
- There are no symptoms of infectious toxicosis, which is typical for vesiculopustulosis.
2. - Decreased immune response due to low IdM content at birth, imperfect phagocytosis.
- Features of the newborn's skin: thin, vulnerable, the epidermis easily separates from the dermis, participates in the release of toxins from the body, incomplete protective function.
- Colonization by microorganisms of the newborn at birth with the formation of a normal ratio of dominant and subdominant flora (75-90% lactic acid: 25-10 conditionally pathogenic). The violation leads to pathological colonization with a predominance of conditionally pathogenic flora.
- Bacterial infection in the mother (pustules on the mammary gland).
3. Staphylococcus aureus, other cocci, opportunistic flora.
4. You can bathe with the addition of a solution of permanganate K (pale pink color) to the water and using baby soap.
5. Each element of the vesiculopustulosis should be opened with a sterile needle and treated with solutions of aniline dyes (brilliant green solution, gentian violet, Castelani paint, an aqueous solution of methylene blue), antibiotics are prescribed only for abundant rashes with an unfavorable premorbid background

Case 27*

The girl was transferred to a children's hospital at the age of 9 days from the maternity hospital.
Medical history data. A child from 2 pregnancies (the 1st pregnancy ended with a medical abortion 7 years ago, the 2nd pregnancy is real). Labor on the 1st, at the 39th week, amniotomy, polyhydramnios, light waters, anhydrous period of 9 hours and 40 minutes.
The condition at birth is severe, the cry is very weak, the Apgar score is 3/5 points. Birth weight 3150 g, length 50 cm, pale yellow skin, swelling of limbs, trunk. In the lungs, breathing is puerile, there is no wheezing, the number of breaths is 50 per minute. The heart tones are muted, the heart rate is 158 per minute. The abdomen is enlarged, the liver is 7 cm below the costal arch along the mid-clavicular line, and the spleen is 6 cm below the rib. The stool is meconial, the urine is light yellow.
The mother has a B(III) Rh(-) blood type, the child has A(II) Rh(+). During pregnancy, the mother had a high titer of antiresus antibodies detected once (one month before delivery).
At birth, the child's total bilirubin is 185 mmol/l, hemoglobin is 40 g/l. At the 20th minute of life, a therapeutic measure was performed, after which the condition improved somewhat due to a decrease in edematous syndrome. However, the jaundice persisted, and in the first four days of life, a total of 5 such therapeutic measures were carried out. From the 7th day of life, jaundice began to decrease, edema decreased by the fifth day of life. On day 7, she had a weight of 2750 g, after that she began to gain weight gradually. The umbilical cord residue disappeared on the 7th day.
Objective examination data upon admission: body temperature 36.5 degrees, weight 2800, head circumference 33.5, chest 31 cm.
The condition is severe, the cry is quiet, there is lanugo on the shoulders and auricles, the umbilical ring is located low. The skin is icteric, dry, cyanosis of the nasolabial triangle, cyanosis of the feet, palms. Umbilical wound with serous discharge, there is swelling of the lower part of the trunk and limbs. The large fontanel is 1x1 cm. In the lungs, breathing is puerile, there is no wheezing. The number of breaths is 44 per minute. Heart tones are loud, systolic murmur is at the top, and the boundaries of relative cardiac dullness are within the age norm. The heart rate is 160 per minute. The abdomen is soft, the liver is +3 cm, the spleen is +1.5 cm. The stool is yellow, the urine is light. Motor activity is reduced, reflexes of newborns are reduced, an unstable symptom of Grefe.
The child is being artificially fed with an adapted 70 ml formula 7 times a day.

Complete blood count: Hb 116 g/l, er. 4.1x1012/l, platelets 143 x 109/l, Le -8.3x109/l, myel.-2, metamyel.-1, P.ya.-2, S.ya.-60, E.-1, L.-26, M.-7. cell size-1, ESR-4 mm/hour.
Blood biochemistry: protein 70 g/l, urea 4.2 mmol/L, cholesterol 3.8 mmol/L, direct - no bilirubin, indirect – 250 mmol/l.
Task:
1. Make a diagnosis.
2. What causes the severity of the child's condition?
3. Schedule a further examination.
4. Which treatment event was held in the hospital 5 times. Other methods of treating this disease?
5. Prognosis.
The answer to case 27
1. Edematous form of hemolytic disease of newborns.
Rationale: incompatibility of the Rh factor in the fetus and pregnant woman, high titers of antiresus antibodies, edema, enlarged liver, low hemoglobin, high indirect bilirubin.
2. The severity of the condition is due to a high level of total bilirubin 185 mmol / l, a low hemoglobin content of 40 g / l, as a result of which hypoxia of the newborn is noted with a low score on the Apgar scale of 3/5 points. Increasing anemia and hypoxia required a 5-fold replacement blood transfusion.
3. Examination plan: monitoring of hemoglobin, erythrocytes, indirect and direct bilirubin levels to monitor the rate of hemolysis and prevent the possibility of bilirubin encephalopathy), determination of the hourly increase in bilirubin, observation by a neurologist.
4. Replacement blood transfusion was performed 5 times in the hospital in order to compensate for the deficiency of red blood cells and hemoglobin. Phototherapy can be recommended for photochemically converting water-insoluble bilirubin into its water-soluble isomer, infusion therapy using colloids to bind and transport indirect bilirubin, as well as solutions
glucose for the energy supply of conjugation. The use of choleretic drugs is also justified in order to prevent bile thickening syndrome and intrahepatic cholestasis.
5. The prognosis is unfavorable, given that there remains a high rate of indirect bilirubin in a child with a severe form of hemolytic disease of the newborn (possibly intrauterine brain damage

Assessment criteria (assessment tool — Case-task)

Grade	Assessment criteria
outstanding	The student has exceeded the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject ("Outstanding")
excellent	The student has met the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject matter. The student has exceptional critical thinking and problem solving skills and has consistently produced high-quality work ("Excellent")
very good	The student has shown a good grasp of the course material, has the necessary skills and has created work of solid quality. The answer was nearly perfect, but there was one small error. (" Very good")
good	The student has generally performed well, but there may still be areas for improvement. The answer was correct, but there were some major errors ("Good")
satisfactory	The student has met the bare minimum of what is expected, but may need to improve in several areas. He has a basic understanding of the subject but likely lack in depth knowledge, critical thinking and analytical skills. The answer was partially correct, there were many major

Grade	Assessment criteria
	errors ("Satisfactory")
unsatisfactory	The student has demonstrated insufficient understanding of the material, has not kept up with the coursework or has submitted incomplete or careless work ("Unsatisfactory" or "Below Average")
poor	The student has not met the minimum standards of achievement for the course ("Poor" or "Fail").

5.1.4 Model assignments (assessment tool - Practical task) to assess the development of the competency ПК-3:

MEDICAL HISTORY
(last name, first name, his age)
Clinical diagnosis:
underlying disease
concomitant diseases
complications
Curation time:
(date, month, and year of start and end)
Supervisor: student (last name, first name, patronymic), ___course, group

1. Passport data
Last name, first name
Age
Gender
Last name, first name, patronymic of the parent
Diagnosis upon referral to the hospital
Diagnosis upon admission to the hospital
2. Complaints
The main complaints made by the child and his accompanying persons are indicated, and the characteristics of each of them are described in detail sequentially from the main to the secondary ones. The main effect is fixed on the complaints that were the reason for the described visit to the doctor.
If there are complaints of pain, then it is necessary to describe their localization, nature, intensity, time of occurrence, frequency, duration, irradiation, constancy, increase, decrease in intensity, connection with body position and movements, eating, urination, defecation, vomiting, etc.
Other complaints are also described in detail.
If the nature of the complaints has changed during the stay at the clinic before the start of the student's curation, it is necessary to highlight the complaints at admission " and "complaints at the time of the start of curation.
1. The history of the present disease
To establish and describe in chronological order the onset and development of the disease from its earliest manifestations to admission to the clinic, the examination and treatment performed, and their results. To find out the reason for the actual hospitalization (deterioration of the condition, ineffectiveness of the treatment, ambiguity of the diagnosis, etc.), specify the type of transportation (ambulance, air ambulance) and the assistance provided during transportation.
2. The child's life story

• It is presented according to the periods of childhood, starting with the parents (age
parents, education, where they work (occupational hazards), health status.
• The number of pregnancies and births of the mother, their outcomes. The health status of other children.
• Acute maternal diseases during the present pregnancy, chronic intoxication, metabolic diseases, endocrine, hereditary
diseases.
• Which child counts. How the pregnancy went. Whether she used
her prenatal leave. The birth is urgent or premature. How the birth went. The duration of the anhydrous period. Obstetrics and obstetric stimulation.
• The newborn period.
• The condition after birth. Apgar score, cry, birth weight and height
, time of application to the breast, sucking activity, weight at discharge from the hospital, time of umbilical cord loss, condition of the umbilical wound. The presence and dynamics of physiological and pathological jaundice.
• The nature of breastfeeding after birth, lactation of the mother, the feeding regime, the observance of night breaks, the reason for the transfer to mixed or artificial feeding, when and in what form additional feeding and complementary feeding were given. The time of introduction of juices, grated apple, when weaned, diet after a year.
• Physical and psychomotor development: when he began to hold his head, be interested in toys, sit, stand, walk, when the first teeth appeared, when he began to hum, pronounce individual syllables, words, subsequent psychomotor development.
• Previous illnesses: what, when, at what age, how they occurred, where they were treated. To find out the presence of diathesis, allergic reactions to food, medications.
• Contact with infectious patients (tuberculosis, childhood infections), tuberculin tests.
• What preventive vaccinations are given to the child. What the child attends (nursery, kindergarten, school). Whether he is registered with specialists.
• Material and living conditions, conditions of upbringing, peculiarities of behavior in the family and team.
• Brief medical history summary: what did the collected medical history give, what negative aspects contributed to this disease, the background on which it developed, and the hereditary predisposition.

3. Physical examination of the child

• It begins with a general examination (assessment of the general condition), the position of the child's body (forced or free), mood, consciousness, eye expression, contact with others, reaction to new people, well-being.
• Facial expression, skin color, dryness, humidity. Elasticity of the skin, turgor of soft tissues, manifestations of exudative diathesis. Pathological rashes. Hemorrhages. The nature of hair growth.
• Examination of the visible mucous membranes of the mouth, nose, and eyes.
• The nature of the subcutaneous fat layer. Thickness, distribution pattern.
• The presence and location of edema.
• The muscular system. The degree of musculature development, muscle tone and strength, volume and character of movements.
• The lymphatic system. Give their characteristics by groups (size, soreness, mobility, solderness).
• The osteoarticular system. The nature of the bone skeleton, the shape of the head, the large fontanel, its size, condition. The shape of the chest. The nature
of teething, their number, condition. Palpation of the bone system (soreness, joint mobility).
• Respiratory organs. Respiratory rate. The nature of shortness of breath, the involvement of auxiliary muscles. Moaning or groaning breathing patterns, voice patterns, screams, and coughs. Percussion and auscultation data. Vocal tremor.
• The cardiovascular system. Examination (cyanosis of the skin, edema, bone deformities). Increased cyanosis during crying. Occlusion of the cardiac region,
visible pulsations of the apex or the entire region of the heart, jugular veins, carotid dance. A heartbeat. The apical thrust, their displacement. A cat purring. Pulse on the radial artery, its characteristics. The boundaries of relative cardiac dullness. Auscultation of the heart. The nature of the tones, their rhythmicity, strengthening or

weakening of the tones, bifurcation, accents on the aorta or pulmonary artery. Heart murmurs, nature, duration, timbre, the point of best listening, the nature of the noise, prevalence, change depending on the position. Blood pressure.
• Gastrointestinal tract: the condition of the oral mucosa, pharynx, tonsils, tongue—coloration, moisture, plaque, follicles, cracks, papillae. The condition of the teeth is milky, permanent, the number, the presence of caries. The shape and size of the abdomen, dilation of the veins of the anterior abdominal wall, visible peristalsis, divergence of the rectus abdominis muscles, the condition of the navel. Abdominal percussion, definition of ascites or pseudoascites. Determination of liver size by Kurlov, palpation of the liver (protrusion from under the costal arch, characteristic of the edge of the liver, consistency, soreness). Percussion of the spleen, determination of the longitudinal size of the spleen. Superficial palpation of the abdomen (tension of the muscles of the anterior abdominal wall, soreness, local seals).
Deep palpation of the abdomen. Palpation of the colon and small intestine, mesenteric nodes. Symptoms: Georgievsky-Mussy, Murphy, Ortner-Grekov. Pain points: Coeur, Mayo-Robson, Desjardins, Boas, Oppenhovsky. Abdominal auscultation: peristalsis. Anus condition: (cracks, gaping). The chair and its characteristics.
Urinary system: examination of the lumbar region, bimanual palpation of the kidneys, palpation and percussion of the bladder. Pain points: upper and lower ureteral points. Goldflam's symptom. Frequency of urination, their soreness, urinary incontinence. Examination data of the external genitalia.
• Endocrine system: disorders of height (gigantism, dwarfism) and weight (exhaustion, obesity), distribution of the subcutaneous fat layer. The state of the thyroid gland (the size of the lobules and isthmus), genitals, secondary sexual characteristics, and their severity. Acceleration or deceleration of sexual development.
• Sensory organs.

4. Local status
A detailed and accurate description of the changes at the site of the painful process. It is necessary to describe in detail the data of his examination, percussion, palpation, the results of checking special symptoms and conducting tests used in the diagnosis of suspected diseases.

5. Preliminary diagnosis
Specify the disease or diseases that can be identified or suspected based on complaints, medical history, objectively! researches.
6. The child's follow-up plan
To indicate the need for laboratory, X-ray, instrumental and other research methods for this patient, as well as consultations with specialists who will be pleased to conduct a differential diagnosis, establish a final clinical diagnosis and determine treatment tactics.
7. Data from laboratory, additional and special research methods, the results of all studies and consultations of specialists are rewritten with dates and their clinical assessment is given.
8. Differential diagnosis
It must be carried out specifically for this patient. It is necessary to take the identified clinical manifestations of the disease as a basis, and then list diseases with similar clinical signs. By comparing and contrasting clinical symptoms, as well as data from available additional research methods, differential diagnostic signs are identified that make it possible to confirm or exclude early suspected diseases. According to the style of presentation of the differential diagnosis, the teacher evaluates the student's skill and ability for clinical thinking.
9. Clinical diagnosis and its justification
The clinical diagnosis is described in the order indicated on the title page, and then the presence of these diseases is justified by the data of anamnesis, objective clinical research and data from additional and special research methods.
10. Etiology and pathogenesis of the disease
They should be described briefly in the appendix to this patient.,
11. Treatment and prevention of the disease

First, all existing treatment methods for this disease and its complications are described. Then the treatment given to the patient and its rationale are described.

12. Diaries of the child's condition by day.

The date, the patient's condition, and the appointment are indicated

The diary provides an assessment of the patient's condition, the dynamics of clinical manifestations of the disease, laboratory and other data from additional research methods, their results are rewritten, and changes in prescriptions are justified. Appointments on the first day are written in full, and in the following days only the appointment of new and cancellation of old methods of treatment.

13. Registration of the temperature sheet The temperature sheet shows the temperature, pulse, if necessary, respiratory rate, blood pressure, weight dynamics, and the nature of stool diuresis. The conducted antibacterial therapy, blood transfusions, plasma, blood substitutes are indicated, if necessary, other therapeutic measures are noted.

14. Epicrisis

Last name, first name, first name, age of the patient, length of hospital stay, diagnosis at referral and admission, examination, clinical diagnosis. The following describes the methods of treatment. the names of the operations and their features, the results of treatment and the condition of the child at the end of the curation, the prognosis and recommendations to the polyclinic doctor after the patient's discharge.

15. List of references

16. Signature of the curator:

Assessment criteria (assessment tool — Practical task)

Grade	Assessment criteria
pass	The student showed knowledge of the educational and program material, completed the tasks
fail	The student discovered significant gaps in the knowledge of the basic educational and program material, made fundamental mistakes

5.2. Description of scales for assessing learning outcomes in the discipline during interim certification

Шкала оценивания сформированности компетенций

Уровень сформированности компетенций (индикатора достижения компетенций)	**плохо**	**неудовлетворительно**	**удовлетворительно**	**хорошо**	**очень хорошо**	**отлично**	**превосходно**
	не зачтено		**зачтено**				
Знания	Отсутствие знаний теоретического материала. Невозможность оценить полноту знаний вследствие отказа	Уровень знаний ниже минимальных требований. Имели место грубые ошибки	Минимально допустимый уровень знаний. Допущено много негрубых ошибок	Уровень знаний в объеме, соответствующем программе подготовки. Допущено несколько	Уровень знаний в объеме, соответствующем программе подготовки. Допущено несколько	Уровень знаний в объеме, соответствующем программе подготовки. Ошибок нет.	Уровень знаний в объеме, превышающем программу подготовки.

	обучающегося от ответа			негрубых ошибок	несущественных ошибок		
Умения	Отсутствие минимальных умений. Невозможность оценить наличие умений вследствие отказа обучающегося от ответа	При решении стандартных задач не продемонстрированы основные умения. Имели место грубые ошибки	Продемонстрированы основные умения. Решены типовые задачи с негрубыми ошибками. Выполнены все задания, но не в полном объеме	Продемонстрированы все основные умения. Решены все основные задачи с негрубыми ошибками. Выполнены все задания в полном объеме, но некоторые с недочетами	Продемонстрированы все основные умения. Решены все основные задачи. Выполнены все задания в полном объеме, но некоторые с недочетами.	Продемонстрированы все основные умения. Решены все основные задачи с отдельными несущественными недочетами, выполнены все задания в полном объеме	Продемонстрированы все основные умения. Решены все основные задачи. Выполнены все задания, в полном объеме без недочетов
Навыки	Отсутствие базовых навыков. Невозможность оценить наличие навыков вследствие отказа обучающегося от ответа	При решении стандартных задач не продемонстрированы базовые навыки. Имели место грубые ошибки	Имеется минимальный набор навыков для решения стандартных задач с некоторыми недочетами	Продемонстрированы базовые навыки при решении стандартных задач с некоторыми недочетами	Продемонстрированы базовые навыки при решении стандартных задач без ошибок и недочетов	Продемонстрированы навыки при решении нестандартных задач без ошибок и недочетов	Продемонстрирован творческий подход к решению нестандартных задач

Scale of assessment for interim certification

Grade		Assessment criteria
pass	**outstanding**	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "outstanding", the knowledge and skills for the relevant competencies have been demonstrated at a level higher than the one set out in the programme.
	excellent	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "excellent",
	very good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "very good",
	good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "good",
	satisfactory	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "satisfactory", with at least one competency developed at the "satisfactory" level.
fail	**unsatisfactory**	At least one competency has been developed at the "unsatisfactory" level.
	poor	At least one competency has been developed at the "poor" level.

5.3 Model control assignments or other materials required to assess learning outcomes during the interim certification with the criteria for their assessment:

5.3.1 Model assignments (assessment tool - Control questions) to assess the development of the competency УК-1

- The history of pediatrics and the organization of therapeutic and preventive care for children in Russia. The structure of morbidity in children. Infant mortality.

- Classification of periods of childhood. What is the reason for the classification? Features of pathology of children in each age period.

- The main indicators of physical development of children. A method for assessing a child's physical development using formulas and special tables (gender, age, height, body weight) of sigma and centile deviations.

- Feeding a baby in the first year of life. Definition of the concepts of natural, mixed and artificial feeding of infants. The benefits of natural feeding. Complementary foods, rules of introduction. Methods of calculating the amount of food for children in the first year of life.

- Borderline conditions of newborns.

- Hemolytic disease of newborns. Differential diagnosis. Features of bilirubin metabolism.

- Intrauterine infections. Etiology, clinic, diagnosis, treatment.

- Anatomical and physiological features of the gastrointestinal tract in children.

- The bacterial flora of the intestine, its transformation after the birth of a child, its physiological role.

- Features of digestion in the intestines of young children. Intestinal absorption disorders syndromes.

- Gastritis, duodenitis in children. Causes, clinic, diagnosis. Principles of diet therapy and drug treatment. Prevention.

- Peptic ulcer in children. Etiology. Clinic. Diagnostics. Principles of diet therapy and drug treatment.

- Biliary dysfunction. Classification, clinic, diagnosis, treatment.

- Constipation in children. Classification. Etiology, pathogenesis, clinic, diagnosis, treatment.

- Anatomical and physiological features of the upper respiratory tract and lungs in young children. Thestateoflocalimmunity.

- Definition of respiratory failure. Its causes, forms, and severity.

- Changes in respiratory parameters and blood gases with various degrees of respiratory failure. The importance of the form of respiratory failure for emergency care.

- Respiratory distress syndrome of newborns.

- Pneumonia in children. Etiology, pathogenesis, clinic, diagnosis, treatment.

- Bronchoobstructive syndrome in children. Etiology, pathogenesis, clinic, diagnosis, treatment.

- Features of intrauterine blood circulation.

- Anatomical and physiological features of the heart and blood vessels in the age aspect.

- Functional indicators of cardiovascular activity in various periods of childhood: pulse rate and nature, stroke and minute volume, blood flow rate, amount of circulating blood, blood pressure. Research methods.

- The concept of circulatory insufficiency in childhood. Clinical manifestations. Diagnostic and correction methods.

- Congenital heart defects in children. Classification. The main clinical manifestations. Diagnostic methods. Principles of treatment. Forecast.

- Features of kidney development in embryogenesis and possible anatomical forms of kidney pathology.

- Features of glomerular filtration of the kidneys in newborns and infants. Methods for assessing glomerular filtration in clinical settings.

- Clinical, laboratory and instrumental diagnostics of kidney and urinary tract diseases in children.

- Acute pyelonephritis in children. Etiology. Clinic. Diagnostics. Principles of treatment.

- Pyelonephritis in children. Primary and secondary. Clinic. Diagnostics. Principles of treatment.

- Acute glomerulonephritis in children. Etiology. Pathogenesis of the main clinical manifestations. Laboratory and instrumental diagnostic methods. Principles of treatment.

- Hereditary chronic nephritis (Alport's disease) in children. Forms of the disease. Diagnostic methods. Principles of treatment.

- Congenital tubulopathies in children. Classification. Pathogenesis of the main nosological forms. Diagnostics.

- Age-related features of erythropoiesis in children. The main laboratory parameters in the age aspect (hemoglobin, erythrocyte levels, MCV, MCH, MCHC)

- Age-related features of leukopoiesis in children. Features of the white blood formula in children of different ages.

- Development of lymph nodes. Features of the structure of the spleen and its functions.

- The importance of the thymus, reticuloendothelial system and mesenchymal elements in the processes of hematopoiesis and blood circulation in children.

- Methods of paraclinical diagnosis of major blood diseases in children – hemoglobinopathies, anemia.

- Iron deficiency anemia in infants. Etiology. Methods of therapy.

- Hemolytic microspherocytic anemia (Minkowski-Shofar disease). Diagnostic methods. Clinic. Methods of therapy.

- Differential diagnosis of various types of anemia in childhood.

- The most common forms of hemoglobinopathies. Structural features of hemoglobin.

- Hemophilia. Features of the blood coagulation process. Clinic. Principles of treatment. Forecast

- Thrombocytopenic purpura in children. Clinic, diagnosis, and treatment.

- Acute and chronic leukemia in children. Features of morphological forms of the disease, clinical analysis of myelogram. Principles of therapy. Forecast.

- Types of leukemoid reactions in children.

- Classification of the main forms of hemorrhagic diathesis. Their hematological characteristics.

- Laboratory diagnostics of various forms of hemorrhagic diathesis in children.

- Hemorrhagic vasculitis in children. Clinic, diagnosis, principles of treatment.

- Hypothyroidism (congenital and acquired). Primary, secondary, and tertiary forms. Clinic. Diagnostics. Principles of therapy.

- Autoimmune thyroiditis. Etiology. Clinic, diagnosis.

- Types of allergic reactions. Their importance in the pathogenesis of diseases.

- Bronchial asthma in children. Classification, clinical and laboratory diagnostics, treatment.

- Allergy to cow's milk proteins. Clinic, diagnosis, and treatment.

5.3.2 Model assignments (assessment tool - Control questions) to assess the development of the competency ПК-2

- Pyloric stenosis in infants. Diagnostics, methods of therapy.

- Definition of respiratory failure. Its causes, forms, and severity.

- Changes in respiratory parameters and blood gases with various degrees of respiratory failure. The importance of the form of respiratory failure for emergency care.

- Respiratory distress syndrome of newborns.

- Adrenal crisis. Clinic, differential diagnosis, treatment.

- Ketoacidosis. Clinic, diagnosis, and treatment.

- Acute laryngitis. Clinic, diagnostics, and treatment measures.

Assessment criteria (assessment tool — Control questions)

Grade	Assessment criteria
outstanding	The student has exceeded the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject ("Outstanding")
excellent	The student has met the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject matter. The student has exceptional critical thinking and problem solving skills and has consistently produced high-quality work ("Excellent")
very good	The student has shown a good grasp of the course material, has the necessary skills and has created work of solid quality. The answer was nearly perfect, but there was one small error. (" Very good")
good	The student has generally performed well, but there may still be areas for improvement. The answer was correct, but there were some major errors ("Good")
satisfactory	The student has met the bare minimum of what is expected, but may need to improve in

Grade	Assessment criteria
	several areas. He has a basic understanding of the subject but likely lack in depth knowledge, critical thinking and analytical skills. The answer was partially correct, there were many major errors ("Satisfactory")
unsatisfactory	The student has demonstrated insufficient understanding of the material, has not kept up with the coursework or has submitted incomplete or careless work ("Unsatisfactory" or "Below Average")
poor	The student has not met the minimum standards of achievement for the course ("Poor" or "Fail").

5.3.3 Model assignments (assessment tool - Control questions) to assess the development of the competency УК-1

- The history of pediatrics and the organization of therapeutic and preventive care for children in Russia. The structure of morbidity in children. Infant mortality.

- Classification of periods of childhood. What is the reason for the classification? Features of pathology of children in each age period.

- The main indicators of physical development of children. A method for assessing a child's physical development using formulas and special tables (gender, age, height, body weight) of sigma and centile deviations.

- Feeding a baby in the first year of life. Definition of the concepts of natural, mixed and artificial feeding of infants. The benefits of natural feeding. Complementary foods, rules of introduction. Methods of calculating the amount of food for children in the first year of life.

- Borderline conditions of newborns.

- Hemolytic disease of newborns. Differential diagnosis. Features of bilirubin metabolism.

- Intrauterine infections. Etiology, clinic, diagnosis, treatment.

- Anatomical and physiological features of the gastrointestinal tract in children.

- The bacterial flora of the intestine, its transformation after the birth of a child, its physiological role.

- Features of digestion in the intestines of young children. Intestinal absorption disorders syndromes.

- Gastritis, duodenitis in children. Causes, clinic, diagnosis. Principles of diet therapy and drug treatment. Prevention.

- Peptic ulcer in children. Etiology. Clinic. Diagnostics. Principles of diet therapy and drug treatment.

- Biliary dysfunction. Classification, clinic, diagnosis, treatment.

- Constipation in children. Classification. Etiology, pathogenesis, clinic, diagnosis, treatment.

- Allergy to cow's milk proteins. Clinic, diagnosis, and treatment.

- Anatomical and physiological features of the upper respiratory tract and lungs in young children. Thestateoflocalimmunity.

- Definition of respiratory failure. Its causes, forms, and severity.

- Changes in respiratory parameters and blood gases with various degrees of respiratory failure. The importance of the form of respiratory failure for emergency care.

- Respiratory distress syndrome of newborns.

- Pneumonia in children. Etiology, pathogenesis, clinic, diagnosis, treatment.

- Bronchial asthma in children. Classification, clinical and laboratory diagnostics, treatment.

- Bronchoobstructive syndrome in children. Etiology, pathogenesis, clinic, diagnosis, treatment.

- Features of intrauterine blood circulation.

- Anatomical and physiological features of the heart and blood vessels in the age aspect.

- Functional indicators of cardiovascular activity in various periods of childhood: pulse rate and nature, stroke and minute volume, blood flow rate, amount of circulating blood, blood pressure. Research methods.

- The concept of circulatory insufficiency in childhood. Clinical manifestations. Diagnostic and correction methods.

- Congenital heart defects in children. Classification. The main clinical manifestations. Diagnostic methods. Principles of treatment. Forecast.

5.3.4 Model assignments (assessment tool - Control questions) to assess the development of the competency ПК-2

- Pyloric stenosis in infants. Diagnostics, methods of therapy.

- Definition of respiratory failure. Its causes, forms, and severity.

- Changes in respiratory parameters and blood gases with various degrees of respiratory failure. The importance of the form of respiratory failure for emergency care.

- Respiratory distress syndrome of newborns.

- Adrenal crisis. Clinic, differential diagnosis, treatment.

- Ketoacidosis. Clinic, diagnosis, and treatment.

- Acute laryngitis. Clinic, diagnostics, and treatment measures.

Assessment criteria (assessment tool — Control questions)

Grade	Assessment criteria
pass	Обучающийся хорошо посещает занятия, на занятиях участвует в обсуждениях, формирует вопросы, высказывает свою точку зрения в дискуссиях. Удовлетворительно прошел тестирование. Ответил на вопросы зачета. Сдал все практические навыки.
fail	Частые пропуски занятий, на занятиях не активен. Неудовлетворительно прошел тестирование. Не ответил на вопросы зачета. Отсутствуют практические навыки.

5.3.5 Model assignments (assessment tool - Case-task) to assess the development of the competency УК-1

Case 1 **

A boy, 7 years old.

Complaints of paroxysmal cough, wheezing.

A boy from the first normal pregnancy, an urgent delivery. Birth weight 3200 g, length 52 cm. The period of newness without features. On artificial feeding since birth.

When eating raspberries, chocolate, eggs, rashes appear on the skin.

Family history: the child's mother has atopic dermatitis. At the age of 3 and 4, in May, the boy had suffocation attacks outside the city, which they were treated on their own when moving to the city. The real attack occurred after eating raspberries. The emergency room doctor carried out emergency measures. The attack was stopped. The asset was transferred to the local doctor.

On examination: the condition is of moderate severity. The skin is pale, blue under the eyes. There is dryness, peeling, and scratching on the cheeks, behind the ears, and in the natural folds of the arms and legs. The tongue is " geographical", jams in the corners of the mouth. Breathing is whistling, audible at a distance. Exhalation is prolonged. BH — 38 in 1 min. Over the lungs percussion a box—tinged sound, auscultation - a mass of dry wheezing over the entire surface of the lungs. The boundaries of the heart are within the normal range. The tones are muted. Heart rate 70 beats/min.

The belly is soft, painless. Liver +2 cm from under the edge of the costal arch. The spleen is not palpable. The chair is daily, decorated.

Complete blood count: er. — $4.0x10^{12}$/L, Hb — 117 g/L, Le— $5.8x10^{9}$/L, e -15%, n/I — 1%, s — 47%, L — 29%, m — 8%, ESR — 3 mm/ an hour.

General urinalysis: relative density — 1016, no mucus, Leucocytes 3-4, Erythrocytes 0.

Chest X-ray: increased pulmonary fields transparency, increased vascular pattern in the root zones, no focal shadows.

Task

1. Make a diagnosis.
2. Urgent measures necessary in this case.
3. Prescribe the treatment needed in the attack-free period.
4. What additional studies will confirm this form of the disease?
5. Which specialists should be shown the child?

The answer to case 1

1. Atopic bronchial asthma, persistent, moderate to severe, attack period. Gastrointestinal food allergy. Atopic dermatitis, exacerbation.
2. Inhalation therapy: inhalation of bronchospasmolytics, corticosteroids, mucolytics, seizure relief with an assessment of the patient's condition 20 minutes after the inhalation. If inhalation is ineffective , infusion therapy (euphyllin, prednisone) is used.
3. Basic therapy is inhaled corticosteroids as monotherapy or in combination with antileukotrienes ((montelukast, singular, montelar). Elimination diet.

4. During the attack period, spirography is performed, during the inter—
attack period, peak flowmetry.
5. Consultation with a dermatologist, gastroenterologist.

Case 2*

Girl, 11 years old. Complaints of fever in the evening up to 38.5 ° C,
wet cough, general weakness.
She got sick 2 weeks ago, when she had sore throat, mucous discharge
from the nose, and a temperature of 37.5 °C in the evenings for two days.
I didn't go to the doctor, I took paracetamol, septolete, lazolvan, nasal drops. The condition improved, the sore throat disappeared, and moderate general weakness persisted. The deterioration occurred 2 days ago, when the temperature rose to 38.5 °C in the evening.,
weakness increased sharply, a cough appeared with the release of a small amount of yellowish-white sputum, after taking paracetamol, the temperature dropped to 37.5 ° C for a short time.
Objectively: the condition is of moderate severity. Sluggish. Appetite is reduced.
The pharynx is hyperemic. Sore throat. Mucous discharge from the nose. The skin
is pale. Breathing is hard in the lungs. Percussion — blunting
of the pulmonary sound on the right in the scapular region. Auscultation —
weakening of breathing in the scapular area on the right. The heart tones
are rhythmic. The abdomen is soft, painless. Liver, spleen are
not enlarged. The stool is daily, well-formed, and the diuresis is normal.
CBC: er. — 4.5 x 10^{12}/l, Hb — 115 g/L, hematocrit — 0.32, Le- 6.9 x 10^{9}/L, b - 0%, e - 2%, p — 2%, s — 56%, L — 35%, m — 5%, the ESR is 37 mm/h.
General urinalysis: the relative density of urine is 1020, the color is yellow, the reaction is acidic, there is no protein, sugar is not detected, leukocytes are 2-4 in subcutaneous tissue, erythrocytes are 0 in subcutaneous tissue, crystals are not present.
ECG: sinus rhythm, 93 beats per 1 min. Diffuse dystrophic changes in the myocardium.
Chest X-ray: infiltration site in S5 on the right. The sinuses are free.
Task
1. Make and justify the diagnosis.
2. Make a differential diagnosis.
3. Additional examination plan.
4. Principles of treatment.
The answer to case 2
1. Community-acquired pneumonia, right-sided, segmental (S5), moderate form.
The onset of the disease is acute, with pronounced catarrhal symptoms, hyperthermia, pneumonic toxicosis, dry cough with scanty yellowish-white sputum, moderate inflammatory changes in the general blood count, increased ESR.
2 Acute bronchitis
3. Sputum culture, repeated ECG.
4. Antibacterial therapy — beta-lactam antibacterial drugs, inhalation of mucolytics, infusion therapy.

Case 3*

A boy, 3 years old. Complaints of fever up to 38.8 ° C during the day, decreases against the background of taking paracetamol, cough is dry. From anamnesis: 2 weeks ago I had acute respiratory viral infections. They did not go to the doctor, they were treated with home remedies. Cough persists for 2 weeks. On inspection, the temperature is 38.0 °C. Active. The pharynx is hyperemic. Nasal breathing is difficult, mucosal discharge. The cough is unproductive and frequent. The respiratory rate is 42’. The skin is pale. The participation of auxiliary muscles in the act of breathing is noted. Auscultation - hard breathing. Dry wheezing sounds are heard. Percussion is a boxed shade of percussion sound. The heart tones are rhythmic. The belly is soft, painless. The

liver and spleen are not enlarged. The stool is daily, well-formed, and the diuresis is normal. General blood test: Er - 4.5 x 1012/L, Hb — 120 g/L, Le - 14.2 x 109/L, e - 9% c - 37%, P - 10%, L - 49%, m - 5%, ESR — 18 mm/h.

Task 1. Make a preliminary diagnosis. 2. Determine the further scope of diagnostic measures. 3. Prescribe treatment according to the suspected pathogen. 4. Determine the scope of rehabilitation measures.

The answer to case 3

1. Acute obstructive bronchitis.
2. Chest X-ray, ELISA for Mycoplasma
pneumoniae, Chlamydia pneumoniae, general IgE, specific IgE antibodies.
3. Antibacterial therapy: macrolides, inhalations of bronchospasmolytics, corticosteroids, mucolytics before bronchospasm relief.
4. Massage, physical therapy, adaptogens. Hypoallergenic lifestyle, diet. Rehabilitation of foci of chronic infection.

Case 4**

A 4-year-old child developed abdominal pain, nausea, and multiple loose stools,
with a temperature of up to 37.5 °C. The child's condition during the examination
is satisfactory, and his well-being does not suffer. The skin is moist,
of normal color, and salivation is sufficient. The tongue has
a whitish coating at the root. The mucous membrane of the oropharynx is moderately
hyperemic. The lymph nodes are not enlarged. Pathology of the lungs and cardiovascular system was not detected. The abdomen is moderately swollen, and rumbles on palpation. The liver is at the edge of the costal arch. The stool was examined by a doctor — liquid, light yellow, with white flakes.

task

1. Make a diagnosis
2. What studies can be recommended in outpatient settings?
3. Prescribe a treatment.
5. What possible complications can be foreseen?
6. Medical examination of the patient after the disease.

The answer to case 4

1. Infectious gastroenteritis, mild severity (probably of viral etiology).
2. Complete blood count, urinalysis. The coprogram. Three-time bacteriological analysis of feces for intestinal group. Stool ELISA for rotavirus antigen or express strip. 3. Take the epid. Please tell the parents the hygiene rules that must be followed when caring for a sick young child. 4. Mechanically and chemically sparing diet, exclusion of milk ; oral rehydration with hypoosmolar solutions (Humana-electrolyte, gastrolite, hydrolite) 1 liter of boiled water – 1 tsp salt without a slide + 6 tsp sugar without a slide For children under 5 years of age, half as much salt and sugar per the same volume of water. Solder off 2-3 tablespoons every 5 minutes at the rate of: The 1st stage is primary rehydration - replenishment of losses that occurred before seeking medical help, and is calculated for 6 hours. The total amount of liquid is 50-80 ml / kg for 6 hours 2-3 tbsp.l.every 5 minutes. After vomiting, do not give 1 hour The 2nd stage is supportive rehydration, which is the replenishment of current fluid losses during acute respiratory failure. 80-100 ml / kg of liquid is prescribed per day. The duration of the second stage of oral rehydration continues until recovery or indications for parenteral correction of dehydration appear. It should be borne in mind that the correction of dehydration is impossible without the use of salt-free solutions, among which preference should be given to drinking water (not mineral!), it is possible to use pectin-containing decoctions (apple compote without sugar, carrot-rice broth). The ratio of glucose-salt solutions to drinking water should be 1:1 for watery diarrhea, 2:1 for severe vomiting, 1:2 for invasive diarrhea. Smecta or other enterosorbent, enzymes, probiotics 5. Dehydration, development of intestinal dysbiosis, in rare cases intestinal invagination. The prognosis is favorable. 6. Follow-up within one month after clinical recovery: dairy-free, sparing diet, enzymes, probiotics.

Case 5 ***
A girl, 3 months old. She was born on time, on natural feeding.
Mental and physical development correspond to age.
The child's father has had a cough in the last two weeks. According to the mother,
at a normal temperature, the child had a cough, which
worsened in the following days. A week later, the child was
hospitalized according to the severity of the condition with a diagnosis of "acute respiratory viral infections, pneumonia".
Upon admission: the condition is of moderate severity. The girl is pale.
Cough is paroxysmal, accompanied by cyanosis of the face, sometimes
with vomiting, discharge of thick, viscous sputum. It's hard in the lungs
breathing, wired wheezing. Heart tones are loud, tachycardia.
According to the internal organs, there are no special features.
At the end of the second week of the disease, the condition became severe.
His face was puffy, and cyanosis of the nasolabial triangle persisted
constantly. The cough worsened, became paroxysmal to 20-30
once a day with vomiting. Periodically, the child had
respiratory arrest, during which cyanosis appeared,
convulsions were noted several times. Then the temperature rose to 38.5 °C,
moist, bubbly wheezes began to be heard in the lungs, and
constant shortness of breath with retraction of the yielding places of the chest.
Heart tones are muted, heart rate is up to 160 beats/min. The child became
sluggish, restless at times.
Chest X-ray: pulmonary fields of increased
pneumatization, a large number of small focal shadows, especially in the basal and lower regions.
Total blood count: erythrocytes — 3.8 $x10^{12}$/l, hemoglobin —
108 g/l, leukocytes — 18.2 $x10^{9}$/l, color - 0.87, e — 5%, n/I — 5%,
s/I — 19%, L — 61%, m — 10%, The ESR is 11 mm/hour.
Task
1. Make a clinical diagnosis.
2. What is the suspected source of the disease?
3. What laboratory tests are needed to clarify the etiology of the disease?
4. Are there any complications of the disease in the child?
5. Evaluate the results of the peripheral blood test.
6. In which department should the patient be treated?
7. Prescribe a treatment.
The answer to case 5
1. Whooping cough, typical, severe form. Multiple atelectasis.
2. The source of infection is the child's father.
3. PCR and ELISA diagnostics for whooping cough. Bacteriological
examination by the method of cough plates.
4. No.
5. A complete blood count is typical for whooping cough.
6. Observation and treatment in the Intensive Care Unit.
7. Medicines: antibiotics (macrolides), inhalation with berodual, lazolvan.
8. Immunization with vaccines DPT, infanrix, pentaxime, tetraxime.

Case 6 ***
A 3-year-old boy became acutely ill. Within a few hours, the body temperature reached 40 ° C, there was difficulty breathing, sore throat. On examination, the child's condition is severe, the child is restless, the voice

has not changed, swallowing any food, even saliva, is difficult and painful. Breathing by his open mouth, excessive salivation, inspiratory shortness of breath at rest with retraction of the supraclavicular pits, and increased shortness of breath when trying to put him to bed. The skin is pale. When examining the pharynx bright diffuse hyperemia. The submandibular lymph nodes are enlarged,
not soldered, and the skin above them is unchanged. Breathing is hard in the lungs,
it is carried out in all departments, there are no wheezes. The respiratory rate is 60 per minute.
The heart tones are loud, the rhythm is correct, the heart rate is 160 beats/min.
Task
1. Make a clinical diagnosis.
2. What causes the severity of the disease?
3. What is the algorithm of emergency care?
4. Features of transportation to the hospital.
5. What is the prevention of this disease?
The answer to case 6
1. Epiglottitis, severe form.
2. The syndrome of infectious toxicosis, a violation of the patency
of the respiratory tract due to an increase in the epiglottis due to inflammation determine the severity of the condition.
3. It is necessary to avoid or postpone activities that cause anxiety to the child (venipuncture, lying on his back, etc.), which can lead to sudden respiratory arrest!
At the prehospital stage, you should not try to examine the larynx! Give antipyretics. Parenterally administered inhibitor-protected aminopenicillins, cephalosporins of the third generation. Humidified oxygen is supplied. The child should be under the supervision of a doctor who has the skills
of tracheotomy, conicotomy and intubation.
4. Transportation in a sitting position.
5. Immunization with Act Hib, Hiberix, Pentaxime, Infanrix-hexa vaccines is the prevention of infection caused by hemophilic bacillus.

Case 7***
The child is 3 months old, sick for the second day: difficulty in nasal
breathing, excessive mucous discharge from the nose, rare dry
cough, temperature 37.5 °C. From the third day of the illness, the condition worsened, the cough became obsessive, shortness of breath appeared and quickly
increased to 80 in 1 minute, the temperature was 37.3 °C. The child's mother
went to an ambulance.
Upon examination of the child by the SMP doctor, the condition was assessed as severe.
The skin, mucous membranes of the lips and oral cavity are cyanotic.
Breathing is noisy, "puffing", shallow, with difficulty
exhalation and participation of auxiliary muscles in the act of breathing,
with inflating of the wings of the nose, retraction of the supraclavicular pits and interstitial
spaces. Well-being suffers to a lesser extent.
The chest is swollen, above the lungs there is a boxy tinge
of percussive sound, the boundaries of cardiac dullness are reduced, the upper
boundaries of the liver and spleen are shifted down by one intercostal space.
During auscultation, breathing is harsh, exhalation is sharply prolonged, and on inhalation
and exhalation, a mass of finely
bubbly and crepitating wheezes is heard from both sides from the front and back. Heart tones are sonorous, frequency
heart rate 172’, I-tone accent over the pulmonary
artery. The boundaries of the heart correspond to age. Other organs

and systems during physical examination without special features.
Task
1. Make a preliminary diagnosis.
2. What syndrome causes the severity of the condition?
3. Determine the indications for hospitalization.
4. What additional research methods should be recommended?
5. Prescribe a treatment.
6. What is the prevention of the disease?
The answer to case 7
1. Bronchiolitis, severe form. Respiratory failure 2.
2. Bronchial obstruction syndrome.
3. Hospitalization is indicated due to the severe condition
of the patient and the presence of bronchial obstruction.
4. Pulse oximetry, general blood analysis, chest X-ray.
5. Oxygen therapy through nasal catheters or head
packs, moistening, hydration, superficial nasal
aspiration, spraying of 3% hypertonic solution through a
nebulizer, berodual - 1 drop / kg, in the absence of the effect of
berodual inhalation, stop.
6. Breast-feeding, exclusion of secondhand smoke,
disinfection of hands, palivizumab (according to indications).

Case 8***
A girl, 11 years old, complains of dull, aching abdominal
pain that occurs 30-45 minutes after eating, as well as weakness, fatigue,
and frequent headaches. The above complaints first appeared 6 months
ago, but no examination or treatment was carried out.
A child from the first, normal pregnancy, an urgent delivery. Since the age of 10, he has been observed by a neurologist for vegetative-vascular dystonia. His mother is 40 years old and suffers from duodenal ulcer; his father is 42 years old and has chronic gastroduodenitis.
Examination: The skin is pale, with moderate humidity. The abdomen is not enlarged. With palpation, tension and pain is noted in the right hypochondrium, in the epigastrium. The liver
protrudes 1.5 cm from under the edge of the costal arch, the edge of the liver is soft,
elastic, and painless. Ortner's symptom (+).
From the side of the lungs and heart - without pathology. The stool is daily, decorated, sometimes lightened.
General blood test: er — 4.6x1012/l, Hb — 130 g/l, color - 0.93,
leuc. — 7.0x109/l, e — 2%, n/I — 2%, s/I — 66%, L — 25%, m — 5%, ESR is 7 mm/hour.
General urinalysis: color is light yellow, transparent,
relative density of urine is 1020, protein is not present, sugar is not present,
leuc. — 1-2 v /w, er. — 0-1 v / w, mucus is a little, there are no salts , no bacteria.
Coprogram: brown, pH — 7.3,
muscle fibers — in small amounts— intracellular starch -
a little, iodophilic flora — a small amount, vegetable fiber — a moderate amount,
mucus — a little, white blood cells –1-2 in the body.
Urine amylase 32 units.
Ultrasound of the abdominal organs: liver — smooth contours, parens-
The chemistry is homogeneous, the echogenicity is enhanced, the vascular network is not expanded, the portal vein is not changed. Gallbladder — 85x37 mm
(the norm is 75x30 mm), the walls are not thickened. Holedoch — up to 3.5 mm
(the norm is 4 mm), the walls are not thickened. After a choleretic breakfast, the gallbladder shrank by 10%.

Task
1. Formulate a diagnosis.
2. Name the aggravating factors of the disease.
3. Prescribe treatment for this child.
4. Tactics of patient monitoring after discharge from the hospital.
The answer to case 8
1. Gall bladder dysfunction of the hypotonic-hypokinetic type.
2. Vegetative-vascular dystonia.
3. Treatment. Therapeutic nutrition is to prescribe foods
with moderate choleretic effects: butter and vegetable oil, cream, sour cream, eggs, vegetable dishes from beets, pumpkins, zucchini, cauliflower, carrots; fruits
rich in dietary fiber (dried apricots, strawberries, raspberries, dried rose hips, etc.); black bread, oatmeal, wheat bran.
Medications: prokinetics (motilium) — 2.5 ml per 10 kg of body weight 3 times a day before meals for 10-15 days for 2-3 months; choleretic drugs (optional):
allohol 1 tablet 3-4 times a day with meals; hofitol
1-2 tablets 3 times a day before meals; flamin 1 tablet 3 times a day before meals; cholenzyme 1 tablet 1-3 times a day after meals; physiotherapy: ozokerite and paraffin applications, electrophoresis with magnesia, sorbitol.
4. During the rehabilitation period, decoctions of choleretic herbs for 2 weeks-
whether quarterly (infusion of oregano herb, decoction of corn
kernels, infusion of rose hips, chamomile 1/4—1/2 cup 3 times
a day for 30 minutes before eating). Mineral water: "Essentuki 4", "Smirnovskaya", "Slavyanovskaya" -3 ml/kg in warm form. In most cases, therapy is performed on an outpatient basis. The best option is spa treatment.

Case 9 **
Girl, 5 years old, constipation is noted from the first year of life, during the last year, stool occurs after 4-5 days, mainly after a cleansing enema, self-defecation is rare, difficult, incomplete. For 6 months encoprese is observed.
The child was full-term, the second in the family, artificial feeding from 2.5 months, was observed by a neurologist with a diagnosis of increased neuro-reflex excitability syndrome.
At the age of 3, she suffered an intestinal infection of unknown etiology.
The mother is 38 years old and suffers from constipation. Father is 40 years old, healthy; the brother is 13 years old, healthy.
Examination: weight 16 kg, height 105 cm, pale pink skin, blue under the eyes, swollen abdomen, painful along the colon, sigma dilated, thickened, fecal stones. Liver + 1.5 cm below the edge of the costal arch, slightly positive vesicular symptoms. There are no changes in other organs.
General blood test: er — 4.0x1012/L, Hb — 118 g/L, Le — 6.2 x 109/L, e — 4%, n/I — 3%, s/I — 47%, L — 40%, M — 6%, ESR — 11 mm/hour.
General urinalysis: color — light yellow, relative density of urine — 1018, protein — no, sugar — no, ep.pl. — a small amount, er. — no, mucus — a little.
Coprogram: dark brown color, well—formed; muscle fibers — in small quantities; intracellular
and extracellular starch — a lot, iodophilic flora — a significant
amount, indigestible vegetable fiber — a little,
mucus - a lot, leuc. — 1-2 per day.
Irrigography: the colon is hypotonic, the sigmoid is
significantly elongated and dilated. The rectum is wide in diameter,
hypotonic, and on examination, a small portion of barium is excreted
from the anus. Emptying from the intestine is incomplete, the pattern of
the colon mucosa is rearranged, smoothed, and gaustation in the distal
the colon is poorly expressed.

Task
1. What kind of pathology can you think about?
2. Encopresis primary or secondary?
3. Treatment plan.
The answer to case 9
1. Dolichosigma. Chronic colitis in the acute stage. Encopresis.
2. Secondary encopresis.
3. Treatment plan: repeated cleansing enemas with salt water (1 tablespoon of table salt per 1 liter of water at room temperature, 200-500 ml of solution should be administered in the enema) until complete emptying of the colon within a few days (before relief
of endocopresis). Microclysms "Microlax" allowed from birth, but it is an emergency medicine, not long-term use, has an irritating effect on the intestinal mucosa).
Then treatment with lactulose or macrogol preparations.
Phase 1 – increasing the dose.
The child is given lactulose or macrogol once a day in an increasing dose until mild diarrhea appears (type 5-6 on the Bristol Stool Scale).
Phase 2.
The child takes a laxative for several months in a dose, maintaining a soft stool. During this time, the rectum, which is no longer stretched by dense feces, becomes toned, the child weans off the association defecation = pain, and during this time the child adapts to the defecation regime: every time after breakfast or after dinner.
Phase 3 – gradual dose reduction.
The drinking regime is 1000 ml per day. To introduce dietary
fiber into the diet (gray cereals, stewed vegetables, dried apricots, prunes, in-
fat). Abdominal massage, physical therapy.

Case 10 ***
A boy, 7 years old, became acutely ill tonight.
The temperature rose to 38 °C, abdominal pain appeared. I had
vomiting once, loose stools with mucus. The ambulance took
him to the infectious diseases department with suspected dysentery. On examination, the patient's forced position on his right side with his legs pulled up to his stomach, and a pained expression on his face. The skin is pale, the tongue is dry, covered with a thick coating, slight pharyngeal hyperemia. In the lungs, breathing is vesicular, and the heart tones are distinct.
Palpation of the abdomen determines soreness and muscle tension.
abdominal wall, a positive symptom of Shchetkin-Blumberg.
The stool in the emergency room is liquid, with an admixture of mucus.
task
1. Make a preliminary diagnosis.
2. Your medical tactics.
The answer to case 10
1. Acute appendicitis.
2. Immediate admission to the surgical department.

Case 11**
At a preventive appointment, a general practitioner examines a boy at the age of 5 months. There are no complaints. It is known from the medical history that the child is from the third pregnancy, the second birth (1 medical report). The pregnancy took place in the winter and spring period, and in the second trimester the woman suffered from acute respiratory viral infections. Throughout pregnancy, there was a threat of miscarriage, chronic
fetoplacental insufficiency. Childbirth without special features.

Birth weight 3300 g, length 53 cm, Apgar score 6/7 points.
The baby is attached to the breast 12 hours after birth. Discharged
He was discharged from the hospital on the seventh day with a diagnosis of chronic
intrauterine hypoxia. Up to 3 months on natural
feeding, then it was switched to artificial, kefir was used as a milk
mixture. The child is registered with a
neuropathologist with a diagnosis of "perinatal CNS lesion of
posthypoxic origin, hypertension syndrome." From the age of 3 months
, juice and fruit puree have been introduced into the diet. Currently, the child receives kefir from the dairy kitchen.
Objectively: the condition is satisfactory. Actual weight
7000 g, length 63 cm. Neuropsychiatric development: the child is over-
turns only from the back to the stomach. The emotional reaction
and the development of the auditory and visual analyzers correspond
to age. The skin is pale and clear. The subcutaneous fat layer is well developed
and evenly distributed. Peripheral
lymph nodes are not enlarged. The turgor of the soft tissues is flabby. The head
is irregularly shaped: flattening of the occipital region, parietal
tubercles, large fontanel 1.5 x 1.5 cm, the edges are pliable. The chest
is cylindrical in shape, and rib beads are palpated. The shape
of the upper and lower limbs, wrist and ankle
the joints are not changed. Muscular hypotension is noted. Breathing
is puerile. The heart tones are clear, the rhythm is correct,
and the noise is functional. The abdomen is oval in shape, moderately swollen,
and painful on palpation. The liver protrudes 1.0 cm from under the edge of the right costal
arch, elastic. The spleen is not palpable. The stool is homogeneous, without
pathological impurities, 2 times a day. Diuresis is age-appropriate.
Complete blood count: er. - 3.9 x 1012/l, Hb - 125 g/l, MSN 26, Le 8,7 x 109/l, e 2%, N 1%, C 38%, L 55 5, m 4%, ESR — 4 mm/hour.
General urinalysis: relative urine density — 1012,
protein is not, sugar is not, lake. — 0-1 in n/a, er. — 0-1 in n/a, epit.
flat. — 0-1 in n/a.
Coprogram: fatty acid — +, lake. — 0-1 in n/a, epit. — 0-1 in n/a.
Task
1.Make a diagnosis 2. What medical history data led to the development of
hypovitaminosis D? 3. Evaluate the data of the child's physical and neuropsychiatric
development. 4. Assign the optimal regime and individual nutrition to the child for one day.
5. In what dose should vitamin D be prescribed?

The answer to case11
1. The child should be monitored with a diagnosis of "rickets of the second
grade, period of peak, subacute course; perinatal lesion
Central nervous system of posthypoxic origin, hypertensive
syndrome".
2. The following factors contributed to the development of rickets: pregnancy during the
winter-spring season, which was unfavorable for the full-
fledged micronutrient supply of the fetus
(lack of sufficient sunlight, deficiency of vitamins
in nutrition); burdened course of pregnancy in the mother,
accompanied by impaired fetal nutrition; early

transfer to artificial feeding; feeding from 3- x
months with an unadapted fermented milk mixture.
3. Objectively: body length corresponds to age, normal weight for the specified height. In neuropsychiatric development, there is a delay in the formation
of general movements: the child should already be trying to turn over from his stomach to his back, there are symptoms of damage to the musculoskeletal system.
4. 5 feedings every 4 hours
6.00 — adapted milk formula 200 ml;
10.0 — gluten-free porridge 150 ml + butter 3 g + milk mixture 50 ml
14.00 — apple sauce 50 g + adapted milk mixture 150 ml;
18.00 — vegetable puree (150 g) + vegetable oil.butter 3 g + milk mixture 50 ml
22.00 —adapted milk formula 200 ml;
It is necessary to cancel kefir and prescribe an adapted milk formula.
5. Vitamin D (Vigantol, AquaD3) — a daily dose of 2500 IU for 45 days.
Monitoring for possible overdose of cholecalciferol should be carried out by the level of calcium in the daily urine (no more than 2 mg / kg per day).

Case 12***
A boy from healthy parents was admitted to the clinic at the age of 1 month and 11 days.
Anamnesis data: Pregnancy 1, proceeded without complications. The birth is urgent, independent. Body weight at birth is 3550 g, body length is 52 cm. He took the breast well, sucked actively. In the 1st month of his life, he gained 700 g in weight.
At the age of 1 month and 7 days, profuse vomiting suddenly appeared, which was repeated daily 3-4 times a day. After 2 days, constipation and decreased urination appeared.
Objective examination data: the condition of the child upon admission to the clinic of moderate severity. Calm, sucking greedily. There is abundant vomiting from the fountain. The weight deficit is 16%. The skin is pale pink, dry. There is a decrease in the subcutaneous fat layer and tissue turgor. In the lungs, breathing is puerile, there is no wheezing. The breathing rate is 40 per minute. The tones of the heart are clear and loud. The heart rate is 140 per minute. The stomach is well-shaped. In the epigastric region, gastric peristalsis in the form of an hourglass is clearly visible. A thickened pylorus the size of a plum stone is palpated. The number of urinations is 7 times a day.
Biochemical blood test: serum protein – 75.2 g/l, blood pH - 7.60, VE - + 8.5 mEq/L, SB -31.2 mEq/L, pCO2 - 31 mmHg.
X-ray of the gastrointestinal tract with barium revealed an enlarged stomach and revealed a barium retention of more than 24 hours.
Task:
1. Make a diagnosis.
2. What are the symptoms characteristic of this disease?
3. Does the child need additional research methods to clarify the diagnosis?
4. Specify the treatment strategy.
5. How and with what to feed such a patient?
The answer to problem 12
1. Congenital pyloric stenosis.
The diagnosis is made on the basis of medical history data.:
- Profuse, repeated vomiting in a fountain at the age of 1 month. 7 days, with simultaneous absence of bowel movements, which may indicate a high intestinal obstruction. Before that, the child ate well, gained 700 g in weight.
Objective inspection data:
- Symptoms of hypotrophy and exsicosis: a 16% body weight deficit, a decrease in the thickness of the subcutaneous fat layer and tissue turgor, dry skin, thirst (sucks greedily).

- Segmental peristalsis of the stomach in the form of an hourglass is visible (a symptom characteristic of pyloric stenosis).
- A thickened pylorus the size of a plum stone is palpated (hypertrophy of the muscular layer of the pylorus).
Laboratory and instrumental research data:
- "Blood clot" syndrome - an increase in protein levels (associated with a decrease in BCC),
- Decompensated metabolic alkalosis (a characteristic change in blood glucose due to a large loss of gastric juice and acid bases with vomiting).
- An increase in the size of the stomach and retention of the barium mixture in the stomach for more than 24 hours (which is typical for pyloric stenosis). A barium retention of more than 8 hours may already indicate a high intestinal obstruction, possibly associated with a malformation of the pyloric part of the stomach.
2. The symptoms are listed in paragraph 1.
3. In this case, the diagnosis is clear and does not require additional examination, however, a child in need of surgical treatment is shown:
- A general blood test with hemosyndrome (platelets, clotting time, bleeding time).
- Biochemical blood test with mandatory determination of urea, electrolytes, protein.
- Chest X-ray (thymomegaly).
- neurosonography (ultrasound examination of the brain through a large fontanel), to exclude pathology associated with birth trauma.
- Electrocardiography.
- Esophagogastroduodenoscopy is possible if no radiopaque examination of the gastrointestinal tract has been performed.
4. Surgical treatment, Fred-Ramstedt pylorotomy with mandatory preoperative preparation (correction of water and electrolyte disorders).
5. Before surgery, fractional feeding with breast milk or an adapted mixture of 20-30 ml every 2 hours, the necessary energy and water needs are provided by infusion therapy, after surgery, feeding begins after 4 hours, 10 ml every 2 hours, daily the amount of milk in feeding is increased by 10 ml. Usually, the amount of nutrition is adjusted to the age norm in 10 days (with an uncomplicated course of the postoperative period).

Case 13**
A 13-year-old girl has been complaining of severe epigastric and pyloroduodenal pain for the last 10 days. The pain is paroxysmal, stabbing, radiating to the back, lower back and right shoulder. The pain occurs 1-2 hours after eating, sometimes hungry and at night, relief comes after eating. In the last 10 days, I have vomited twice without blood, which has brought relief. The chair is regular and decorated.
It is known that the girl does not eat regularly, often dry-boiled, allergic reactions to citrus fruits, chocolate, eggs. Heredity is burdened – my mother and grandmother have peptic ulcer of the duodenum. 2 weeks ago, the child had a conflict at school.
Objective research data on admission.
Examination: height 160 cm, weight 45 kg. The skin is pale and clear. The language is "geographical", overlaid with a grayish-white coating. The heart tones are clear, loud, and the pulse rate is 92 per minute. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 24 per minute. With deep palpation of the abdomen, moderate muscular defiance, pain in the epigastrium and pyloroduodenal region, Desjardins and Mayo-Robson points. The chair is not changed.
Sexual formula: P3, Ma3, Ah3, Me0.
EGDS - the mucous membrane of the esophagus is pink, the cardia is closed. There is cloudy mucus in the stomach; the mucosa of the antrum of the stomach is nesting focally hyperemic, edematous, and flat protrusions on the walls. The mucous membrane of the bulb is edematous, hyperemic, with a 0.6 cm scar on the anterior wall and a 1.0x0.8 cm rounded ulcerative defect with a hyperemic roller on the back, and the bottom is covered with fibrin. A biopsy was taken.

Ultrasound of the abdominal organs: liver and gallbladder without pathology. There is a large amount of contents in the stomach on an empty stomach, its walls are thickened. Pancreas: head 21 mm (norm-18), body 18 mm (norm-15), tail 24 mm (norm-18), its echogenicity is reduced.
Urease test for Hp infection: positive (++).
Task
1. Make a diagnosis.
2. Etiology of the disease.
3. Prescribe treatment for this patient.
4. What aggravating factors can be identified during this disease?
Answers to case 13
1. Peptic ulcer of the duodenal bulb, exacerbation, uncomplicated. Chronic non-atrophic gastritis, Hp-associated.
Anamnesis: burdened heredity, diet disorders, food allergies, psycho-emotional stress.
Pain syndrome: typical localization in the epigastrium and pyloroduodenal region, occurs after eating after 1-2 hours, hunger and night pains; vomiting, which brings relief.
Objectively: moderate muscular defenseness, pain in the epigastric and pyloroduodenal regions;
EGDS data: the presence of a peptic ulcer; inflammation of the gastric mucosa, duodenum, typical of gastroduodenitis and peptic ulcer;
Hp infection test ++.
2. Hp infection, heredity, food allergy, chronic gastroduodenitis, stress
3. Table 1 for 4 weeks (sparing the mucous membrane of the stomach and duodenum 12),
Antihelicobacterial therapy, taking into account the presence of Hp infection. The drugs of choice are amoxicillin, clarithromycin, de-nol, and esomeprazole.
4. Food allergies, diet disorders, stress (conflict at school).

Case 14 ** 2
A 9-year-old girl
She has been ill for 2 months. After suffering from acute respiratory viral infections, the girl began to complain of thirst, increased appetite, weight loss, and frequent urination. 5 days before the hospitalization, the condition deteriorated sharply, abdominal pain, vomiting, drowsiness, and the smell of acetone from the mouth appeared. On the eve of hospitalization, shortness of breath, repeated vomiting with abdominal pain, and constipation appeared.
Anamnesis data: a child from the 2nd, normal pregnancy and normal birth. Body weight at birth is 3500 g, length is 50 cm. She grew and developed satisfactorily. Previous illnesses: acute respiratory viral infections 2 times a year, chickenpox at the age of 6. Vaccinations are made according to age. My maternal grandmother has type 2 diabetes.
Objective examination data. Upon admission, the condition is severe: severe weakness, sleeps, but when contacted, answers monosyllabic questions and immediately falls asleep. The skin is dry, and the turgor of the tissues is reduced. Dyspnea. Harsh breathing during auscultation. Tachycardia, heart sounds are muffled. Blood pressure is 90/50 mmHg. The pillar. The abdomen is painful on palpation. Liver + 1.5 cm from under the costal arch. Urination is frequent, and the vulva is hyperemic.
Examination data: Blood sugar 30 mmol/l, Sugar in urine (300 ml) 5%, acetone ++++, CBS: PH 7.1, VE – (-20).
Task
1. Make a diagnosis.
2. Continue the examination.
3. Prescribe treatment.
4. Substantiate the phase of the disease.
5. Give an assessment of the CBS indicators.
Answers to case 14

1. Type I diabetes mellitus, familial, grade II ketoacidotic coma, vulvitis.
Rationale: thirst, increased appetite, weight loss, frequent urination, dry skin, acetone odor from the mouth, progressive increase in these symptoms, drowsiness, vomiting, inactivity, shortness of breath, abdominal pain, enlarged liver, vulvar hyperemia, blood sugar 30 mmol / l, acetone in urine ++++, Grandmothers have diabetes mellitus, which is typical for type 1 diabetes.
Constipation, repeated vomiting, shortness of breath, abdominal pain, severe weakness, and metabolic decompensated acidosis are characteristic of grade II diabetic ketoacidotic coma.
2. Blood sugar tests every 3-4 hours, glucosuric profile, CBS every 3-4 hours biochemical blood analysis (protein and fractions, urea, cholesterol, lipoproteins, bilirubin, transaminases, electrolytes), ECG.
3. Infusion therapy: 5-10% glucose + saline solution, 4-5% K chloride solution, panangin, heparin, vitamin C.
4. Constipation, repeated vomiting, shortness of breath, abdominal pain, severe weakness, metabolic decompensated acidosis are characteristic of diabetic ketoacidotic coma of the II degree.
5. Decompensated metabolic acidosis (pH – 7.1, VE-(-20).

Task 15 1 2 3
The girl is 12 days old.
Anamnesis data: a child from the 1st, normal pregnancy, from an urgent delivery. Birth weight 3600, length 52 cm. She screamed immediately, was put to her chest after 12 hours, and sucked actively. The parents are young and healthy. Heredity is not burdened.
At birth, attention was drawn to the irregular structure of the external genitalia: the labia majora resembled a scrotum, and the clitoris was hypertrophied. After being discharged from the 8th day of life, the child began vomiting, which has intensified in recent days, the girl began to refuse to feed, noticeably lost weight.
Objective examination data: the condition is severe, sluggish, vomiting continues, tissue turgor is reduced, the skin is dry, pigmentation in the nipple area. The large fontanel is sunken. Breathing is harsh. The heart tones are moderately muted. The abdomen is soft, with slight pain in the epigastric region. The stool is diluted 1 time. Urination is rare.
Survey data: Biochemical blood test: total protein 65 g/l, urea 6.4 mmol/L, cholesterol 4.2 mmol/L, total bilirubin 4 mmol/L, potassium 6.8 mmol/L, sodium 129.0 mmol/L, Ca 2.4 mmol/L, AlT – 20 Units/l.
Task
1.Make a dignosis
2. What indicator confirms the diagnosis?
3. Prescribe treatment.
4. Make a differential diagnosis
5. Prognosis in case of incorrect diagnosis of this disease.
Answers to case 15
Congenital dysfunction of the adrenal cortex, a losing form. The clinic notes an irregular structure of the genitals (labia majora resemble a scrotum, the clitoris is hypertrophied, pigmentation around the nipples). Vomiting, exsicosis are noted, hyperkalemia and hyponatremia were detected in a biochemical blood test.
2. To confirm the diagnosis, it is necessary to determine 17-hydroxyprogesterone in the blood.
3. Glucocorticoids and mineral corticoids are prescribed to correct the hormonal profile.
4. The wasting form of congenital adrenal cortex dysfunction should be differentiated from pyloric stenosis.
5. With late treatment, children tend to remain stunted for life.

Case 16***
The girl is 11 years old
Anamnesis data: a girl from the 2nd normal pregnancy, 2 normal urgent deliveries. Body weight at birth is 3500 g, length is 50 cm. The newborn period was without any special features, it developed normally. School performance was excellent in the 1st grade, then decreased.
Previous illnesses: measles in severe form at the age of 6, acute respiratory viral infections – 3-4 times a year. At the age of 8, she was diagnosed with tuberculosis intoxication and received ftivazid. Since the age of 7, there

has been a decrease in appetite and the appearance of constipation. She stopped growing at the age of 8, and the tooth replacement was disrupted.
Objective examination data: height 124 cm, weight 26 kg upon admission to the hospital. The pulse rate is 60 per minute. Blood pressure is 75/35 mmHg. Lethargy, dry skin, and brittle hair are noted. Auscultation – deafness of heart tones, systolic murmur. The liver protrudes from under the edge of the costal arch by 3 cm.
Laboratory research data:
• Cholesterol 18 mmol/l, blood protein 79 g/l
• Radiograph of the hands: bone differentiation corresponds to 6 years.
Task:
1. Make a diagnosis.
2. Outline a further examination plan.
3. Prescribe a treatment.
Answers to case 16
1. Acquired, moderate hypothyroidism. The diagnosis was made on the basis of medical history and clinic data. Acquired hypothyroidism is supported by the age of onset of the disease (from the age of 7), and clinical symptoms such as decreased appetite, constipation, impaired tooth replacement, stunted growth, brittle hair, bradycardia, deafness of heart tones, arterial hypotension up to 75/35 mmHg, and an increase in liver size. Typical clinical symptoms are moderate, indicating moderate severity of the disease.
The examination revealed hypercholesterolemia of up to 18 mmol/l, and a lag in bone age.
2. Ultrasound of the thyroid gland: there may be a decrease in size and signs of autoimmune thyroiditis. Hormonal profile: decreased T4 and T3, TSH changes (increase in primary, decrease in secondary or tertiary hypothyroidism). With a decrease in TSH, exclude pathology of the hypothalamic-pituitary region (X-ray of the skull- Turkish saddle, EEG, CT scan of the brain).
In a general blood test, anemia of an iron and protein deficiency nature can often be detected.
The ECG shows bradycardia, low voltage of the teeth, and blockages.
3. The main one is lifelong hormone replacement therapy.
More often than others, L-thyroxine is used in an individually selected dose, against which all clinical symptoms should disappear and metabolic and hormonal parameters should normalize.

Case 17**
Girl, 10 years old Medical history: a child from 1 pregnancy, during which acute respiratory diseases were repeatedly noted. In childbirth, the umbilical cord is wrapped around the neck. At birth, the body weight is 2500 g, the length is 49 cm. The Apgar score is 8/9 points. Previous illnesses: acute respiratory viral infections, rubella at the age of 4, chickenpox at the age of 6, repeated sore throats from the age of 1.5.
A year ago, the mother noticed that the child had fatigue, weakness, fatigue, increased appetite, weight loss, bilateral exophthalmos. In the last 2 weeks, the condition has worsened: dizziness, fainting, irritability, trembling of the upper extremities, changes in handwriting, sweating.
Objective examination data: Height 142 cm, weight 21.5 kg. Fussiness, mood lability, and sweating are noted. Funnel-shaped chest. Pulsation of the neck vessels is pronounced. Apical thrust in the V intercostal space, reinforced. The boundaries of relative cardiac dullness are: left – along the mid–clavicular line, right - along the right edge of the sternum. The tones of the heart are accentuated. Pulse is 138 per minute, blood pressure is 120/45 mmHg. Liver +1 cm. The thyroid gland deforms the neck, is elastic, homogeneous, and painless. Exophthalmos, Grefe's symptom +, Mobius's symptom +. Tremor of the eyelids, tongue, fingers of outstretched hands. Laboratory research data:
• Complete blood count: erythrocytes 5.4 x 1012/L, Hb126 g/L, leukocytes 7.9 x 109/L, platelets 344 x 109/L, n/I – 2%, s/I – 57%, lymphocytes 24%, eosinophils - 3%, ESR 5 mm/hr. The duration of bleeding is 3!, blood clotting: the beginning is 1!, the end is 3!.
• Urinalysis: clear, light yellow, relative density is 1025, protein is absent, sugar is not present, leukocytes are 1 in the field of vision, erythrocytes are absent.

• Biochemical blood test: total protein 66 g/L, urea 3.6 mmol/L, triglycerides 0.99, cholesterol 2.8 mmol/L, beta – lipoproteins 26, indirect bilirubin 15 mmol/L, seromucoid 0.31, sugar 6.6 mmol/L, thymol test 3.4, K – 3.9 mmol/L, Ca++, 1.12 mmol/L.
• Blood test for hormones: T3 free – 35 (norm 4.25-8.10), T4 free. 80.3 (norm 10 – 25.0), TSH – 0 (norm 0.24 – 3.5).
Task:
1. Make and justify the diagnosis.
2. Evaluate the research.
3. Continue the examination.
4. Prescribe treatment.
Answers case 17
1. Diffuse toxic goiter, grade II, moderate severity.
The thyroid gland is enlarged and deformes the neck, which corresponds to grade II goiter (according to the WHO classification). The gland is elastic and homogeneous on palpation, which is typical for diffuse goiter. The following symptoms of thyrotoxicosis are expressed: fatigue, increased appetite, weight loss, irritability, hand tremor, handwriting changes, sweating, tachycardia up to 138 beats per minute, increased systolic blood pressure, decreased diastolic blood pressure, that is, high pulse blood pressure (120/45), exophthalmos, positive eye symptoms (Grefe, Me6ius), eyelid tremor, the tongue of the fingers of outstretched hands. The above data are expressed moderately, which corresponds to the average severity of the disease.
2. The diagnosis is confirmed by the hormonal profile – increased T3 freedom, T4 freedom, decreased TSH. The ECG revealed tachycardia, sinus arrhythmia, increased activity of the left ventricular myocardium. Metabolic changes in the blood – a decrease in cholesterol and an increase in glucose are characteristic of thyrotoxicosis.
3. Radiograph of the hand – this pathology is characterized by an acceleration of bone age.
4. Thyrostatics (mercazolil, metisol) are the main treatment, before which a general blood test with hemosyndrome is required.
When prescribing these drugs, there may be side effects: leukopenia, thrombocytopenia, neutropenia, which may be a contraindication for prescribing these drugs. It is necessary to monitor these indicators in dynamics. The initial dose of thyrostatics is 0.5-1 mg / kg of body weight in 3 doses. With a decrease in symptoms of thyrotoxicosis, the dose of the drug is reduced to a maintenance dose (5-10 mg / day). Beta–blockers are prescribed to normalize pulse rate and blood pressure. Sedative therapy in the form of valerian preparations is indicated.

Case 18 * 1, 3, 5
The boy is 11 years old
In February, the child's skin began to darken, there was weakness, headache, craving for salt. Over the summer, the darkening of the skin acquired an intensity unusual for a normal reaction to sunlight. Since October of this year, headaches have become more frequent, appetite has decreased, blood pressure drops with a tendency to decrease, and drowsiness have been noted.
He was treated in the neurological department, where cerebroprotective and symptomatic therapy was performed. The condition worsened and the child was transferred to the endocrinology department.
Anamnesis data: a boy from the 1st pregnancy with toxicosis in the first trimester. Delivery on time, independent. Aspiration of green amniotic fluid during childbirth. Birth weight 3600 g, length 54 cm. He screamed after sucking off the mucus. On the 4th day, pneumonia was diagnosed. During the examination and treatment in the neonatal unit, a congenital heart defect (non-closure of the botall duct) was detected, for which the child was operated at the age of 3.
Heredity: brother – CHD (atrial septal defect; paternal grandmother – type II diabetes mellitus, paternal grandfather – CHD (atrial septal defect).
Objective examination data: the condition is serious, conscious. He reacts negatively to the examination. The position is passive. Body temperature 36.10 C. The skin is bronze in color (even on areas of the body that are

closed from sunlight), and areas of hyperpigmentation are especially pronounced on the extensor surfaces of both elbow and knee joints, sacrum, birthmarks, and scrotum. The muscular and subcutaneous fat layer is not pronounced enough, the turgor of the tissues is preserved, and the hair is light. The gum mucosa is dirty gray in color. The tongue is covered with a gray coating. Vesicular respiration. Respiratory rate is 92 per minute, blood pressure is 80/40 mmHg. There is no appetite.

Clinical blood test: Hb 123 g/l, erythrocytes - $4.2x10^{12}$/l, MCH 26, platelets - 246000, Le $9.4X10^{9}$/l, p 1%, s 74%, lymph. 16%, mon. 2%, ESR 3 mm/hour.

Urinalysis: yellow, density – 1015, transparent, protein – absent, glucose – absent, ketone bodies – absent, blood reaction – negative, epithelium – absent, leukocytes – 1 in the field of vision, cylinders – absent, bacteria – absent.

Biochemical blood test: total protein 66 g/L, urea 9.0 mmol/L, creatinine 54.0 mmol/L, total cholesterol 2.7 mmol/L, triglycerides 0.78, β-lipoproteins 21, K 6.0 mmol/L, sodium 109 mmol/L, calcium ++ 1.1 mmol/L, AlAT 25, AsAT 31, LDH 300, glucose 3.5 mmol/l.

Blood glucose test: in 900 - 2.8 mmol /L, in 1300 - 4.5 mmol /L.

Hormonal profile: cortisol 87 (norm 150-660).

Task

1. Make and justify the diagnosis.
2. Evaluate the research.
3. Continue the examination.
4. Prescribe treatment.

Answers to case 18

1. Chronic adrenal insufficiency, primary, acquired, decompensation phase.

The following complaints and medical history data support acquired chronic adrenal insufficiency: weakness, headache, salt cravings, darkening of the skin, decreased appetite, weight loss, which lasted about six months. Darkening of the skin indicates the primacy of this pathology.

2. The diagnosis is confirmed by metabolic changes: typically– an increase in K, a decrease in sodium and glucose, and a decrease in cortisol. The lack of treatment caused decompensation of the disease: severe weakness, nausea, decreased blood pressure, darkening of the skin and mucous membranes.

3. Continue the examination: ECG – since electrolyte disturbances are pronounced in this disease (signs of hyperkalemia are noted on the ECG, rhythm disturbances are possible), ultrasound of the adrenal glands – with the primary genesis of the disease, a decrease in their size is sometimes detected, ECG and electrolytes change during treatment.

4. Lifelong hormone replacement therapy. The dose of glucocorticoids (cortef, prednisone) and mineral corticoids (cortinef) is individually selected.

Case 19 *

A 7-year-old girl was admitted to the hospital complaining of pain in the lumbar region and frequent urination.

Medical history data: a child from the first pregnancy, was born on time. The neonatal period was uneventful. She suffered from chickenpox and rubella from childhood infections. He often suffers from acute respiratory viral infections.

The girl is periodically bothered by abdominal pain; her temperature often rises; sometimes painful urination is noted.

Objective examination data: upon admission to the hospital, the condition is of moderate severity. The skin is pale, the temperature is 38 ° C. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 30 per minute. The tones of the heart are clear and loud. The heart rate is 88 per minute. Pasternatsky's symptom is positive on both sides. Urination is frequent and painful.

Survey data:

Total blood count: Hb - 114 g/L, er - 4.5x 1012/L, leuc. - 18.5 x 109/L, n/I - 10%, s - 70%, L - 22%, m - 9%, ESR - 30 mm/hour.

General urinalysis: alkaline reaction, protein 0.06, white blood cells – completely in the field of vision, red blood cells – 0-1 in the field of vision, bacteria - a lot.
Kidney ultrasound: the kidneys are positioned correctly, the size of the left kidney is larger than normal. The cup-pelvis system is expanded on both sides, more on the left. Suspected doubling of the left kidney.
Task
1. Make a diagnosis and justify it.
2. Specify additional research methods to clarify the diagnosis.
3. What is the purpose of cystography?
4. What kind of research should be conducted to prescribe adequate therapy?
Answers to case 19
1. Secondary chronic pyelonephritis on the background of abnormal kidney development, the stage of exacerbation. - Chronic, as there is a history of repeated fever, combined with abdominal pain and painful urination - Secondary, because ultrasound revealed an expansion of the collecting systems of both kidneys and a suspected doubling of the kidney on the left (developmental anomaly) - Pyelonephritis is in the acute stage, because in the anamnesis and upon admission there are phenomena of general infectious toxicosis, a positive symptom of Pasternatsky, pronounced leukocyturia and bacteriuria, an inflammatory reaction of peripheral blood
2. Microbiological examination of urine (microflora typing taking into account sensitivity to antibiotics), Zimnitsky urine analysis (pyelonephritis is characterized by a moderate restriction of the concentration ability of the kidneys), cystography, cystoscopy according to indications, nephroscintigraphy 6 months after the relief of pyelonephritis attack (the presence of foci of renal parenchyma wrinkling in a child with a chronic inflammatory process)
3. According to ultrasound (enlargement of the collecting kidney system), the presence of vesicoureteral reflux cannot be excluded.
4. Determination of the sensitivity of microflora to antibiotics (antibioticogram)

Case 20 *
A 5-year-old girl was admitted to the hospital complaining of swelling.
Anamnesis data: a child from the first normal pregnancy, delivery on time. Birth weight 3300 gr., length 52cm. Physical psychomotor development without special features. Previous illnesses: chickenpox, often has acute respiratory viral infections. Allergic history: atopic dermatitis up to 3 years old.
After suffering from acute respiratory viral infections, the girl developed swelling on her face and rare urination. The district doctor diagnosed Quincke's edema and prescribed suprastin (chloropyramine). Despite the ongoing therapy, the swelling increased, and the girl was hospitalized.
Physical examination: upon admission to the hospital, the condition is severe. The skin is pale. Pronounced swelling of the face, lower leg, feet, anterior abdominal wall, ascites. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 34 per minute. The heart tones are muted. Pulse is 110 beats per minute, blood pressure is 90/60 mmHg. The abdomen is soft and painless. Liver +2.0 cm from under the edge of the costal arch. He rarely urinates. She excreted 180 ml of urine per day.
- In the urine analysis, protein 8.0 0/00, leukocytes 2-3 in the field of vision, red blood cells are absent.
- Complete blood count: Hb - 127 g/L, ER - $3.8x10^{12}$/L, Le 10.2 $x10^{9}$/L, n 1%, s 36%, L 54%, e - 2%, m - 8%, ESR - 50 mm/hour.
Task
1. Make a diagnosis
2. Justify the diagnosis.
3. What biochemical blood parameters are necessary to clarify the diagnosis?
4. Diet for this disease
5. Prescribe a treatment.
Answers to case 20
1-2.Acute glomerulonephritis with nephrotic syndrome (idiopathic nephrotic syndrome).

Preschool age, the onset of the disease after acute respiratory viral infections, severe edematous syndrome, oliguria, massive proteinuria, and accelerated ESR are typical of nephrotic syndrome (morphologically, it is most likely a disease of minimal changes)
3. Total protein and protein fractions (pronounced hypoproteinemia in combination with hypoalbuminemia can be expected), lipidogram (compensatory increase in cholesterol and triglycerides).
Elevated urea, creatinine, and blood electrolytes (hyperkalemia is possible) may indicate the development of acute renal failure.
Coagulogram (tendency to hypercoagulation)
4. Exclusion of salt and meat (contains sodium chloride), protein restriction (with massive proteinuria), fluid intake in accordance with diuresis and the patient's desire.
5. Bed rest for the period of severe edema, then do not limit physical activity (prevention of osteoporosis)
- Diet (see above),
- Short-course antibacterial therapy for the period of severe edema (prevention of bacterial complications-pneumonia, peritonitis with anasarca).
- Immunosuppressive therapy – prednisone 2 mg / kg or 60 mg/ m2 of body surface area for 6 weeks daily, followed by a switch to an alternating regimen of 1-1.5 mg / kg or 40 mg / m2 for 6 weeks, followed by gradual withdrawal with normal urine tests.
- Anticoagulants, antiplatelet agents (heparin, curantil) to prevent microthrombosis in severe hypovolemia
- Diuretics - extremely careful administration of loop diuretics against the background of adequate hydration of the patient (intravenous drip of rheopolyglucine followed by slow administration of lasix 1-5 mg / kg in 150 ml of glucose)
- In the future, proton pump inhibitors (side effects of corticosteroids on the gastrointestinal tract)

Case 21 **
The girl, 11 years old.
Medical history data: from the 2nd pregnancy, delivery in term. The neonatal period was normal. After 1 year, the child periodically had a rash and Quincke's edema after ingestion of eggs, chocolate, oranges. He often suffers from acute respiratory viral infections.
She suffered from follicular tonsillitis 15 days before her hospitalization. She received antibiotic treatment and drank a lot, including orange juice. On the 14th day of the illness, the child developed pain in the ankle joint and a rash on his legs.
Physical examination upon admission: on the shins, thighs, buttocks, symmetrical, more on the extensor surfaces and around the joints, there is an abundant exudative hemorrhagic rash. The ankle joints are swollen. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 20 per minute. The tones of the heart are sonorous. The pulse rate is 80 per minute. Blood pressure is 110/60 mmHg. The abdomen is soft and painful on palpation around the navel, at the point of the gallbladder. The stool was after the enema, decorated, with a small amount of mucus.
The formula of sexual development: Ma2, P2, A2, Me0.
- Blood test: Hb-126 g/l, er.-4.0x10^{12}/l, Pt -322x10^{9}/l, Le 7.4x10^{9}/l, p-6%, s-64%.eos.-8%, L.-18%.m-4%, ESR-24 mm/hour.
The bleeding time according to Duque is 3 minutes, the clotting time according to Burger: the beginning is 1 minute, the end is 3 minutes.
Task
1. Make a diagnosis.
2. What clinical syndromes are characteristic of this disease?
3. The examination plan.
4. Treatment plan.
5. What factors could contribute to the development of the disease?
Answers to case 21

1. Hemorrhagic vasculitis with skin, joint and abdominal syndrome. The diagnosis is based on anamnesis (food allergy to eggs, chocolate, citrus fruits). This disease developed 2 weeks after suffering a sore throat. In the clinic of this child's disease, typical manifestations on the skin are exudative hemorrhagic rash on the thighs, lower buttocks, soreness and swelling of the ankle joints, cramping abdominal pain typical of abdominal syndrome.
2. a) cutaneous, b) articular, c) abdominal, d) renal
3. a) Blood test + bleeding time and clotting time, b) coagulogram, c) stool for coprology,
d) urinalysis e) biochemical blood analysis (protein and its fractions, urea, creatinine, potassium, sodium)
4. a) Diet 1
b) detoxification therapy, c) heparin therapy, d) desensitizing therapy
e) rehabilitation of foci of infection.
5. a) allergic potential of the body (exudative diathesis, food allergy),
b) frequent acute respiratory viral infections, c) follicular sore throat suffered in 2 weeks.

Task 22 1,3,5**

The girl is 7 years old.
Anamnesis data: a child from the 1st, normal pregnancy. The delivery in term. She grew and developed normally. She had acute respiratory viral infections 3-4 times a year.
A month before admission, she began to complain of abdominal pain, and her appetite worsened. There were periodic short-term temperature increases up to 38-38.5 degrees without signs of inflammation of the upper respiratory tract. I didn't go to the doctor. In the last days before the hospitalization, pain appeared in the right knee joint, and the child was hospitalized.
Physical examination data upon admission: the skin is pale with a grayish tinge. The mucous membranes are pale. Isolated ecchymoses and an uncommon petechial rash on the legs and chest. Posterior cervical, submandibular, tonsillar, axillary and inguinal lymph nodes up to 1x2 cm, multiple, mobile are palpated. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 25 per minute. Tachycardia. Heart tones are muted, systolic murmur is at the top. Blood pressure is 96/50 mmHg. The abdomen is soft, with moderate pain on palpation in the navel area. The liver protrudes from under the edge of the costal arch by 3 cm, the spleen by 2 cm. Urination is free.
- Blood test: hemoglobin -89 g/l, er.-2.5 x1012/l, platelets-15 x 109/l, leukemia- 42.0 x 109/l, blasts-98%, lymph - 2%, ESR-29 mm/hour.
Task
1. Make a diagnosis.
2. Additional examination plan.
3. What kind of research will clarify the form of the disease?
4. Treatment plan.
5. What diseases should be given a differential diagnosis according to the clinical picture?
Answers to case 22
1. Acute leukemia. Justification: a month before admission, appetite worsened, abdominal pain appeared, and the temperature periodically rose to 38-38.5 ° C without signs of an inflammatory process. On examination, there are signs of intoxication (the skin is pale with a grayish tinge, the mucous membranes are also pale). There are petechiae and ecchymoses on the skin; all groups of lymph nodes, liver and spleen are enlarged. Tachycardia, heart murmur. In the blood test, erythrocytes, hemoglobin, platelets, leukocytosis, and blasts are reduced by 98%.
2. Additional examination plan:
- Bone marrow puncture, to confirm the diagnosis and assess normal bone marrow circulation.
- X-ray of the right knee joint. It should be carried out to identify the cause of pain in it (osteoporosis, destruction).
3. Which study will clarify the form of the disease?

- Cytochemical study will differentiate the main variants of acute leukemia (lymphoblastic, myeloblastic, monoblastic, erythromyelosis).
- Immunological. The use of immunodiagnostics of leukemic cells will make it possible to identify T, B, and O subvariants of acute lymphoblastic leukemia, which have clinical features and different sensitivity to therapy.
4. Treatment plan.
- A combination of chemotherapy drugs: 6 mercaptopurine, methotrexate, prednisone, vincristine, cyclophosphamide, rubomycin, L-asparaginase. Chemotherapeutic treatment is carried out in accordance with the data of cellular kinetics, which determines the order and rhythm of their administration.
- Hemotherapy. This is a transfusion of whole blood or its components (erythromass, leukomass, thrombomass) for replacement purposes in connection with the development of anemia, neutropenia, and thrombocytopenia.
- Antibiotic therapy. Antibiotic therapy is used to prevent septic complications, since in this group of patients the body's resistance (phagocytosis, immune response) is suppressed as a result of the tumor process and prolonged cytostatic therapy.
5. What diseases should be given a differential diagnosis?
- Hypoplastic anemia. Common clinical signs: anemia (pallor of the skin and mucous membranes, tachycardia), hemorrhagic syndrome (petechiae, bruises, bleeding).
Differences in the clinical picture: hypoplastic anemia does not have hyperplastic syndrome (enlargement of lymph nodes, liver and spleen, pain in bones and joints is not characteristic). There are no blast cells in blood tests, and the number of bone marrow cells in the bone marrow punctate decreases sharply.
- Thrombocytopenic purpura. Common clinical signs: hemorrhagic syndrome (petechiae, bruises, bleeding).
Differences in the clinical picture: the patient's well-being is satisfactory, there is no intoxication syndrome (grayish skin tone, weakness, lethargy, decreased appetite). There is no enlargement of the lymph nodes, liver, and spleen. There are normal numbers of neutrophils in blood tests, and there are no blast cells. In the bone marrow, only the megakaryocytic germ is changed (either increased or decreased).
- Infectious mononucleosis. Common clinical signs: lymphoproliferative syndrome (enlargement of all groups of lymph nodes, liver, and spleen). Differences in the clinical picture: there is no anemic and hemorrhagic1 syndromes. Blood tests show atypical mononuclears and there are no blast cells.
- Lymphogranulomatosis. Common clinical symptoms: enlarged lymph nodes. Differences in the clinic: with lymphogranulomatosis, there is a limited increase in lymph nodes at the beginning, itchy skin, and sweating. There are no blast cells in the blood. During a lymph node puncture, Berezovsky-Sternberg cells are detected.

Case 23** 1, 2,3,5
A 3-month-old child was admitted to the hospital with complaints of vomiting, frequent loose stools, and refusal to eat.
From the anamnesis of life: a child from 1 normal pregnancy. Delivery on time, physiological. He screamed at once. Birth weight 3300, length 51 cm. The newborn period proceeded smoothly. She has been on artificial feeding since 1 month due to hypogalactyly in her mother. It feeds on an adapted mixture, by the hour – 6 times a day and sucks 130-140 g. From 2 months it receives juices, before illness – 30.0 ml. A few days ago, they began to give cottage cheese for 5 g.
He gained weight: for the 1st month - 600 g., for the 2nd – 800 g., for the 3rd - 750 g. He holds his head for 2 months, watches his eyes, hums. I haven't been ill until now.
Epidemiological history: there were no acute gastrointestinal diseases in the family. Medical history: became acutely ill, fever increased to 37.5, vomiting appeared, loose stools up to 10 times on the first day of the disease. Upon examination by the district pediatrician: the temperature is normal, the state of health is slightly disturbed. The stool was examined – mushy, with an abundant admixture of mucus and greenery. When the mother was questioned, it turned out that she had made cottage cheese from kefir the day before and for the first time gave the child 20 g. It was recommended to pause feeding for 6 hours and reduce the feeding dose by half, and give the baby a drink of slightly sweetened weak tea. Over the next 2 days, the child's condition continued to deteriorate; he had a temperature of 37.2-37.5, vomiting up to 3-5 times a day, and stool increased up to 20 times. He was re-examined by a doctor and hospitalized.

Clinical examination data: temperature 37.0. The child's condition is very severe, sluggish. The scream is almost soundless, weak. Motor-inactive. The skin is pale, with a “marble” pattern, slightly moist to the touch. The turgor of the tissues is sharply reduced. The skin on the inner thigh gathers into a fold. The large fontanel sinks in. The facial features are pointed. The breathing rate is 40-45 per minute. There were no respiratory abnormalities. The pulse rate is 150 beats per minute, the heart tones are slightly muffled. Sucks sluggishly, reluctantly. It does not suck out more than 30 ml. Vomiting occurs when trying to give more. The tongue is covered with a whitish coating, but moist. The abdomen is swollen, and rumbling is pronounced on palpation. There is a painful reaction to palpation of the abdomen. The liver protrudes from under the edge of the costal arch by 2 cm. The spleen is not palpable. Stools for the first day of stay in the department up to 20 times, liquid with an admixture of mucus and greenery, with a small amount of feces. The anus opens easily when the buttocks are dilated.
Urination up to 5-6 times a day, in small portions.
In the neuropsychiatric status: sluggish, muscle tone is reduced, tendon reflexes are alive. He reacts to the examination with a weak cry.
Blood test: Hb-140 g/l, er. -5.0x1012 , leuc. – 15x109 , Pt. -15%, S.I. -55%, L. – 25%, M. – 5%, ESR – 20 mm/hour.
2. Blood: pH – 7.32, pCO2 – 35, VE – (-) 7.0
3. Biochemical blood test: total protein – 70.0 g/l, sodium – 128 mmol/L, potassium – 4.0 mmol/L.
Task
1. Identify the main clinical syndromes in the clinical picture of the patient's disease.
2. What are the most likely causes of the disease in our patient?
3. What is the main reason for the severity of the patient's condition, and what causes it?
4. Upon admission, the child was weighed, and his body weight turned out to be 5,000 g.
a) what is the degree of exicosis?
b) what is the likely type of dehydration in this patient, indicate typical clinical and laboratory signs?
5. Formulate a detailed diagnosis of our patient's disease at this stage of his examination.
6. Name the main directions of treatment measures for this patient.
7. To restore water-salt metabolism:
a) determine the total amount of fluid per day needed by this child to eliminate dehydration.
b) what components will this estimated amount of fluid consist of for this child on the first day of treatment,
c) list the therapeutic solutions needed for infusion therapy of this patient.
Answers to case 23
1. The child has the following syndromes: - infectious toxicosis, - exsicosis, - regurgitation and vomiting.
2. The most likely cause of the disease is an intestinal infection, however, it must be remembered that consuming kefir in such large quantities can lead to functional dyspepsia. In the future, it is necessary to make a differential diagnosis between them using additional clinical and laboratory data.
3. The main cause of the severity of the condition is associated with the syndrome of regurgitation and vomiting, which is primary, infectious toxicosis, exicosis, metabolic disorders are associated with loss of fluid and electrolytes directly due to dyspeptic disorders.
4.
a) body weight deficiency is defined as follows: the proper body weight at this age is:
3300+600+800+750=5450 G. We know the actual body weight At admission, the child's weight turned out to be 5000 g. This means that in 3 days the child lost 5450-5000 = 450 g 450x100: 5450= 8.26%, which corresponds to grade II exicosis.
b) hypotonic type of exsicosis (lethargy, adynamia, decreased muscle tone, tachycardia, deafness of heart tones, low serum K levels).
5. Intestinal infection of unknown etiology, intestinal toxicosis with grade II exicosis, hypotonic type.
6. Unloading of food: an introductory tea break for 8-12 hours, then an adapted low-lactose mixture (fermented milk) - fractional meals of 20-30 ml every 2 hours 10 times a day. Fractional rehydration with Rehydrone, given the presence of repeated vomiting in very small amounts.

- Etiotropic therapy: parenteral cephalosporins, oral aminoglycosides.
- Pathogenetic therapy: correction of water and electrolyte disorders – rehydration infusion therapy with glucose-saline solutions, polarizing mixture (glucose-insulin-potassium mixture), fight against acidosis.
- The second stage is the use of bacteriophages, probiotics, and enzymes.
7. The total amount of fluid is about 190-200 ml / kg of body weight.
Necessary components:
- Colloidal solutions: plasma, 10% albumin solution, rheopolyglucine,
- Crystalloid solutions: 10% glucose solution, Ringer's solution, saline solution, 4-5% potassium chloride solution, B vitamins.

Case 24 **
The boy is 2 months old.
Medical history data: a child from 4 pregnancies to 2 births. The previous pregnancy ended with a medical abortion. The real pregnancy occurred 6 months after the abortion. Course: toxicosis of the 2nd half (nephropathy with edema and proteinuria, in the 3rd trimester she suffered from influenza with symptoms of infectious toxicosis).
Birth at 40 weeks, spontaneous, early discharge of amniotic fluid (10 hours before the rest period), green, cloudy waters. The duration of labor is 4 hours. The child screamed immediately, was applied to the breast for 3 days, took the breast badly, sucked sluggishly. The Apgar score is 7/8 points. Birth weight 4500, length 54 cm. Physiological weight loss - 250 g, by the time of discharge from the hospital, the weight had not recovered. From the moment of birth, there was at first an abundance of regurgitation, and at the time of hospitalization - after almost every feeding.
The data of an objective examination in the admission department: age 2 months, the child is restless, blushes when screaming, there is a tilting of the head and tension of the large fontanel. After adapting to the examination, he calmed down and reacts with positive emotions. The head is dolichocephalic in shape with an overhanging occiput, the seams are not closed, a large fontanel 2x2 cm, slightly tense. Moderate chin tremor, clonus of the lower extremities, expansion of the tendon reflex zone. Grefe's symptom is determined.
1. A presumptive diagnosis?
2. What diseases should be differentiated from?
3. The optimal examination plan?
4. Treatment program?
The answer to problem 24:
1. The child has a perinatal CNS lesion of hypoxic origin with intracranial hypertension syndromes, increased neuro-reflex excitability, regurgitation syndrome. The diagnosis can be established on the basis of medical history data.:
- This pregnancy occurred a short time after the abortion.
- Burdened pregnancy (nephropathy, infectious diseases with symptoms of toxicosis).
- Early discharge of amniotic fluid, they are green, cloudy (signs of chronic intrauterine hypoxia).
- Rapid delivery (duration 4 hours).
- Low score on the Apgar scale (8/9 is acceptable, 9/10 points are ideal)
- Large fetus (the combination of rapid delivery and large fetus creates the prerequisites for hypoxic-traumatic damage to the central nervous system)
Objective inspection data:
Restlessness, tilting of the head and tension of the large fontanel (a sign of intracranial hypertension), overhanging occiput (a sign of intrauterine hypoxia), chin tremor, clonus of the lower extremities, expansion of tendon reflexes (a sign of increased neuro-reflex excitability), Grefe's symptom (a sign of intracranial hypertension).
2. In all cases of intracranial hypertension, especially with tension of the large fontanel, tilting of the head, symptoms of hyperesthesia, it is necessary to make a differential diagnosis.:

- With meningitis - With intracranial hemorrhage - With neurotoxicosis (especially if there are signs of infection).
3. General blood test (to exclude bacterial infection).
Biochemical blood test (electrolytes, protein).
Neurosonography (ultrasound examination of the brain through a large fontanel).
Fundus examination (changes with severe intracranial hypertension)
Consultation with a neurologist
When symptoms of infectious toxicosis are added, a lumbar puncture (diagnostic and therapeutic measure) is indicated.
4. If it is not meningitis or subarachnoid hemorrhage, then all therapeutic measures are aimed at establishing a balance between the production and outflow of cerebrospinal fluid, therefore they are prescribed:
- Diuretics that selectively reduce the formation and increase the outflow of cerebrospinal fluid (diacarb at an initial dose of 60 mg in the morning according to the scheme -3 days to give, day break). Glycerol.
- Asparkam, panangin (to compensate for the resulting deficiency of K and magnesium).
- Glycine (to improve metabolic processes in the brain
- Sedative drugs: phenobarbital, phenibut (to lower the threshold of sensitivity from external receptors).
- Since the patient has regurgitation syndrome associated with dyskinesia of the gastrointestinal tract due to dysregulation of pyloric muscle tone against the background of increased neuro-reflex excitability, it is necessary to prescribe neuroveget blockers (2% solution of diprazine, or aminazine at a dose of 1 mg / kg body weight, a single dose 2 times a day i / m). After feeding, keep the patient upright for 20-30 minutes to remove air from the stomach (aerophagy), prescribe an antireflux mixture for 2-3 weeks.

Case 25 **

The newborn is 9 days old.
Anamnesis data: born from the 1st, normal pregnancy, in term, with a body weight of 3050 g, 50 cm. The umbilical cord residue disappeared on day 4, and the umbilical wound healed quickly. The child had toxic erythema in the maternity hospital. Discharged from the maternity hospital on the 5th day with a body weight of 2,950 g. He was breastfed. There were small pustules on the skin of the mother's breast.
On the 6th day of the child's life, single pustules the size of a pinhead appeared on his face, filled with yellowish contents. The mother didn't think much of it. The child was not bathed.
Objective examination data: 3 days after discharge from the maternity hospital, the district pediatrician noted the presence of multiple pustules on the child's head, trunk, buttocks, and limbs. There were dried pustules with the formation of crusts on the face. The body temperature did not rise, the breathing in the lungs was clear, purulent, the number of breaths was 44 per minute. The heart tones are clear, pure, and the heart rate is 144'. The abdomen is soft, painless, the liver is + 2 cm, the spleen is not palpable. The breast sucks willingly, stools 3-4 times a day without pathological impurities.
Task:
1. Make a diagnosis.
2. Name the factors contributing to the development of this disease.
3. Which pathogen is most often caused by this disease?
4. Is it possible to bathe a child?
5. Prescribe a treatment.
The answer to problem 25:
1. Vesiculopustulosis. The diagnosis can be made based on medical history data.:
- The presence of small pustules on the skin of the breast (a possible cause of infection).
- The appearance on the 6th day of the child's life of single pustules the size of a pinhead, filled with yellowish contents (typical time of occurrence and localization).
- Objective inspection data:
- Multiple pustules on the head, trunk, buttocks, limbs, dried pustules with crusts.
- There are no symptoms of infectious toxicosis, which is typical for vesiculopustulosis.
2. - Decreased immune response due to low IdM content at birth, imperfect phagocytosis.

- Features of the newborn's skin: thin, vulnerable, the epidermis easily separates from the dermis, participates in the release of toxins from the body, incomplete protective function.
- Colonization by microorganisms of the newborn at birth with the formation of a normal ratio of dominant and subdominant flora (75-90% lactic acid: 25-10 conditionally pathogenic). The violation leads to pathological colonization with a predominance of conditionally pathogenic flora.
- Bacterial infection in the mother (pustules on the mammary gland).
3. Staphylococcus aureus, other cocci, opportunistic flora.
4. You can bathe with the addition of a solution of permanganate K (pale pink color) to the water and using baby soap.
5. Each element of the vesiculopustulosis should be opened with a sterile needle and treated with solutions of aniline dyes (brilliant green solution, gentian violet, Castelani paint, an aqueous solution of methylene blue), antibiotics are prescribed only for abundant rashes with an unfavorable premorbid background

Case 26

Boy 4.5 months old

Medical history data: a twin child from the 2nd pregnancy. The first pregnancy ended in a miscarriage. Delivery at the 30th week of pregnancy. Birth weight 1700 g, length 36 cm. He screamed at once. Artificial feeding. I did not receive complementary foods or juices. He gained weight satisfactorily. He was not ill. In the last 2 weeks, the mother began to notice that the child had become sluggish, drowsy, skin paleness had increased, and appetite had decreased.

Objective examination data: moderate condition. The skin and conjunctiva are pale, and the subcutaneous fat layer is well developed. Breathing is puerile, there is no wheezing. The number of breaths is 48 per minute. The heart tones are moderately muted. The heart rate is 154 per minute. The belly is soft, painless. The liver is palpated from under the edge of the costal arch by 3 cm, the spleen by 1.5 cm. The stool is regular.

Total blood count: er. – 3.2x1012/l, Hb – 70 g/l, color index –0.65, platelets – 250,000, leukocytes 5.6x109/l, C.I.-32, lymphocytes - 64, monocytes - 3, eosinophils.- 1, the ESR is 6 mm/hour.

Questions:

1. Which clinical form of anemia is most likely in this case:
2. What are the main causes of anemia in this child?
3. What indicators of serum iron are most likely in this case?
4. Should this child be prescribed iron supplements?
5. List the diseases that contribute to the development of anemia in infants.

The answer to case 26

1. Late anemia of premature babies. The baby was born at 30 weeks of pregnancy with a body weight of 1700 g and a length of 36 cm. In this case, in the absence of iron prophylaxis, iron deficiency anemia always develops due to insufficient iron deposition during pregnancy.
2. Multiple pregnancies, prematurity, artificial feeding, feeding defects (I did not receive juices and complementary foods).
3. Low serum iron levels.
4. As a result, it is necessary to prescribe iron supplements.
5. Prematurity, rickets, hypotrophy.

Case 27*

The girl was transferred to a children's hospital at the age of 9 days from the maternity hospital.

Medical history data. A child from 2 pregnancies (the 1st pregnancy ended with a medical abortion 7 years ago, the 2nd pregnancy is real). Labor on the 1st, at the 39th week, amniotomy, polyhydramnios, light waters, anhydrous period of 9 hours and 40 minutes.

The condition at birth is severe, the cry is very weak, the Apgar score is 3/5 points. Birth weight 3150 g, length 50 cm, pale yellow skin, swelling of limbs, trunk. In the lungs, breathing is puerile, there is no wheezing, the number of breaths is 50 per minute. The heart tones are muted, the heart rate is 158 per minute. The abdomen is

enlarged, the liver is 7 cm below the costal arch along the mid-clavicular line, and the spleen is 6 cm below the rib. The stool is meconial, the urine is light yellow.
The mother has a B(III) Rh(-) blood type, the child has A(II) Rh(+). During pregnancy, the mother had a high titer of antiresus antibodies detected once (one month before delivery).
At birth, the child's total bilirubin is 185 mmol/l, hemoglobin is 40 g/l. At the 20th minute of life, a therapeutic measure was performed, after which the condition improved somewhat due to a decrease in edematous syndrome. However, the jaundice persisted, and in the first four days of life, a total of 5 such therapeutic measures were carried out. From the 7th day of life, jaundice began to decrease, edema decreased by the fifth day of life. On day 7, she had a weight of 2750 g, after that she began to gain weight gradually. The umbilical cord residue disappeared on the 7th day.
Objective examination data upon admission: body temperature 36.5 degrees, weight 2800, head circumference 33.5, chest 31 cm.
The condition is severe, the cry is quiet, there is lanugo on the shoulders and auricles, the umbilical ring is located low. The skin is icteric, dry, cyanosis of the nasolabial triangle, cyanosis of the feet, palms. Umbilical wound with serous discharge, there is swelling of the lower part of the trunk and limbs. The large fontanel is 1x1 cm. In the lungs, breathing is puerile, there is no wheezing. The number of breaths is 44 per minute. Heart tones are loud, systolic murmur is at the top, and the boundaries of relative cardiac dullness are within the age norm. The heart rate is 160 per minute. The abdomen is soft, the liver is +3 cm, the spleen is +1.5 cm. The stool is yellow, the urine is light. Motor activity is reduced, reflexes of newborns are reduced, an unstable symptom of Grefe.
The child is being artificially fed with an adapted 70 ml formula 7 times a day.
Complete blood count: Hb 116 g/l, er. 4.1x1012/l, platelets 143 x 109/l, Le -8.3x109/l, myel.-2, metamyel.-1, P.ya.-2, S.ya.-60, E.-1, L.-26, M.-7. cell size-1, ESR-4 mm/hour.
Blood biochemistry: protein 70 g/l, urea 4.2 mmol/L, cholesterol 3.8 mmol/L, direct - no bilirubin, indirect – 250 mmol/l.
Task:
1. Make a diagnosis.
2. What causes the severity of the child's condition?
3. Schedule a further examination.
4. Which treatment event was held in the hospital 5 times. Other methods of treating this disease?
5. Prognosis.
The answer to case 27
1. Edematous form of hemolytic disease of newborns.
Rationale: incompatibility of the Rh factor in the fetus and pregnant woman, high titers of antiresus antibodies, edema, enlarged liver, low hemoglobin, high indirect bilirubin.
2. The severity of the condition is due to a high level of total bilirubin 185 mmol / l, a low hemoglobin content of 40 g / l, as a result of which hypoxia of the newborn is noted with a low score on the Apgar scale of 3/5 points. Increasing anemia and hypoxia required a 5-fold replacement blood transfusion.
3. Examination plan: monitoring of hemoglobin, erythrocytes, indirect and direct bilirubin levels to monitor the rate of hemolysis and prevent the possibility of bilirubin encephalopathy), determination of the hourly increase in bilirubin, observation by a neurologist.
4. Replacement blood transfusion was performed 5 times in the hospital in order to compensate for the deficiency of red blood cells and hemoglobin. Phototherapy can be recommended for photochemically converting water-insoluble bilirubin into its water-soluble isomer, infusion therapy using colloids to bind and transport indirect bilirubin, as well as solutions
glucose for the energy supply of conjugation. The use of choleretic drugs is also justified in order to prevent bile thickening syndrome and intrahepatic cholestasis.
5. The prognosis is unfavorable, given that there remains a high rate of indirect bilirubin in a child with a severe form of hemolytic disease of the newborn (possibly intrauterine brain damage

5.3.6 Model assignments (assessment tool - Case-task) to assess the development of the competency ПК-2

Case 1 **

A boy, 7 years old.
Complaints of paroxysmal cough, wheezing.
A boy from the first normal pregnancy, an urgent
delivery. Birth weight 3200 g, length 52 cm. The period of
newness without features. On artificial feeding since birth.
When eating raspberries, chocolate, eggs, rashes appear on the skin.
Family history: the child's mother has atopic dermatitis. At the age of 3 and 4, in May, the boy had suffocation attacks outside the city, which
they were treated on their own when moving to the city. The real attack occurred after eating raspberries. The emergency room doctor carried out emergency measures. The attack was stopped. The asset was transferred to the local doctor.
On examination: the condition is of moderate severity. The skin
is pale, blue under the eyes. There is dryness, peeling, and scratching on the cheeks, behind the ears, and in the natural
folds of the arms and legs. The tongue is "
geographical", jams in the corners of the mouth. Breathing is whistling, audible at
a distance. Exhalation is prolonged. BH — 38 in 1 min. Over the lungs percussion
a box—tinged sound, auscultation - a mass of dry wheezing
over the entire surface of the lungs. The boundaries of the heart are within the normal range. The tones are muted. Heart rate 70 beats/min.
The belly is soft, painless. Liver +2 cm from under the edge of the costal arch. The spleen is not palpable. The chair is daily, decorated.
Complete blood count: er. — $4.0x10^{12}$/L, Hb — 117 g/L, Le—
$5.8x10^{9}$/L, e -15%, n/I — 1%, s — 47%, L — 29%, m — 8%, ESR — 3 mm/
an hour.
General urinalysis: relative density — 1016, no mucus, Leucocytes 3-4, Erythrocytes 0.
Chest X-ray: increased pulmonary fields transparency, increased vascular pattern in the root zones, no focal shadows.
Task
1. Make a diagnosis.
2. Urgent measures in this case.
The answer to case 1
1. Atopic bronchial asthma, persistent, moderate
to severe, attack period. Gastrointestinal food
allergy. Atopic dermatitis, exacerbation.
2. Inhalation therapy: inhalation of bronchospasmolytics,
corticosteroids, mucolytics, seizure relief with an assessment
of the patient's condition 20 minutes after the
inhalation. If inhalation is ineffective, infusion therapy (euphyllin, prednisone) is used.

Case 2**

A 4-year-old child developed abdominal pain, nausea, and multiple loose stools,
with a temperature of up to 37.5 °C. The child's condition during the examination
is satisfactory, and his well-being does not suffer. The skin is moist,
of normal color, and salivation is sufficient. The tongue has
a whitish coating at the root. The mucous membrane of the oropharynx is moderately

hyperemic. The lymph nodes are not enlarged. Pathology of the lungs and cardiovascular system was not detected. The abdomen is moderately swollen, and rumbles on palpation. The liver is at the edge of the costal arch. The stool was examined by a doctor — liquid, light yellow, with white flakes.
Task
1. Make a diagnosis
2. What studies can be recommended in outpatient settings?
3. Prescribe a treatment.
5. What possible complications can be foreseen?
The answer to case 2
1. Infectious gastroenteritis, mild severity (probably of viral etiology).
2. Complete blood count, urinalysis. The coprogram. Three-time bacteriological analysis of feces for intestinal group. Stool ELISA for rotavirus antigen or express strip. 3. Take the epid. Please tell the parents the hygiene rules that must be followed when caring for a sick young child. 4. Mechanically and chemically sparing diet, exclusion of milk ; oral rehydration with hypoosmolar solutions (Humana-electrolyte, gastrolite, hydrolite) 1 liter of boiled water – 1 tsp salt without a slide + 6 tsp sugar without a slide For children under 5 years of age, half as much salt and sugar per the same volume of water. Solder off 2-3 tablespoons every 5 minutes at the rate of: The 1st stage is primary rehydration - replenishment of losses that occurred before seeking medical help, and is calculated for 6 hours. The total amount of liquid is 50-80 ml / kg for 6 hours 2-3 tbsp.l.every 5 minutes. After vomiting, do not give 1 hour The 2nd stage is supportive rehydration, which is the replenishment of current fluid losses during acute respiratory failure. 80-100 ml / kg of liquid is prescribed per day. The duration of the second stage of oral rehydration continues until recovery or indications for parenteral correction of dehydration appear. It should be borne in mind that the correction of dehydration is impossible without the use of salt-free solutions, among which preference should be given to drinking water (not mineral!), it is possible to use pectin-containing decoctions (apple compote without sugar, carrot-rice broth). The ratio of glucose-salt solutions to drinking water should be 1:1 for watery diarrhea, 2:1 for severe vomiting, 1:2 for invasive diarrhea. Smecta or other enterosorbent, enzymes, probiotics 5. Dehydration, development of intestinal dysbiosis, in rare cases intestinal invagination. The prognosis is favorable.

Case 3 ***
A girl, 3 months old. She was born on time, on natural feeding.
Mental and physical development correspond to age.
The child's father has had a cough in the last two weeks. According to the mother,
at a normal temperature, the child had a cough, which
worsened in the following days. A week later, the child was
hospitalized according to the severity of the condition with a diagnosis of "acute respiratory viral infections, pneumonia".
Upon admission: the condition is of moderate severity. The girl is pale.
Cough is paroxysmal, accompanied by cyanosis of the face, sometimes
with vomiting, discharge of thick, viscous sputum. It's hard in the lungs
breathing, wired wheezing. Heart tones are loud, tachycardia.
According to the internal organs, there are no special features.
At the end of the second week of the disease, the condition became severe.
His face was puffy, and cyanosis of the nasolabial triangle persisted
constantly. The cough worsened, became paroxysmal to 20-30
once a day with vomiting. Periodically, the child had
respiratory arrest, during which cyanosis appeared,
convulsions were noted several times. Then the temperature rose to 38.5 °C,
moist, bubbly wheezes began to be heard in the lungs, and
constant shortness of breath with retraction of the yielding places of the chest.
Heart tones are muted, heart rate is up to 160 beats/min. The child became

sluggish, restless at times.
Chest X-ray: pulmonary fields of increased
pneumatization, a large number of small focal shadows, especially in the basal and lower regions.
Total blood count: erythrocytes — 3.8 x10^{12}/l, hemoglobin —
108 g/l, leukocytes — 18.2 x10^{9}/l, color - 0.87, e — 5%, n/I — 5%,
s/I — 19%, L — 61%, m — 10%, ESR is 11 mm/hour.
Task
1. Make a clinical diagnosis.
2. What is the suspected source of the disease?
3. What laboratory tests are needed to clarify the etiology of the disease?
4. Are there any complications of the disease in the child?
5. Evaluate the results of the peripheral blood test.
6. In which department should the patient be treated?
7. Prescribe a treatment.
The answer to case 3
1. Whooping cough, typical, severe form. Multiple atelectasis.
2. The source of infection is the child's father.
3. PCR and ELISA diagnostics for whooping cough. Bacteriological
examination by the method of cough plates.
4. No.
5. A complete blood count is typical for whooping cough.
6. Observation and treatment in the Intensive Care Unit.
7. Medicines: antibiotics (macrolides), inhalation with berodual, lazolvan.

Case 4 ***
A 3-year-old boy became acutely ill. Within a few hours, the body temperature reached 40 ° C, there was difficulty breathing, sore throat. On examination, the child's condition is severe, the child is restless, the voice has not changed, swallowing any food, even saliva, is difficult and painful. Breathing by his open mouth, excessive salivation, inspiratory shortness of breath at rest with retraction of the supraclavicular pits, and increased shortness of breath when trying to put him to bed. The skin is pale. When examining the pharynx bright diffuse hyperemia. The submandibular lymph nodes are enlarged,
not soldered, and the skin above them is unchanged. Breathing is hard in the lungs,
it is carried out in all departments, there are no wheezes. The respiratory rate is 60 per minute.
The heart tones are loud, the rhythm is correct, the heart rate is 160 beats/min.
Task
1. Make a clinical diagnosis.
2. What causes the severity of the disease?
3. What is the algorithm of emergency care?
4. Features of transportation to the hospital.
5. What is the prevention of this disease?
The answer to case 4
1. Epiglottitis, severe form.
2. The syndrome of infectious toxicosis, a violation of the patency
of the respiratory tract due to an increase in the epiglottis due to inflammation determine the severity of the condition.
3. It is necessary to avoid or postpone activities that cause anxiety to the child (venipuncture, lying on his back, etc.), which can lead to sudden respiratory arrest!
At the prehospital stage, you should not try to examine the larynx! Give antipyretics. Parenterally administered inhibitor-protected aminopenicillins, cephalosporins of the third generation. Humidified oxygen is supplied. The child should be under the supervision of a doctor who has the skills

of tracheotomy, conicotomy and intubation.
4. Transportation in a sitting position.
5. Immunization with Act Hib, Hiberix, Pentaxime, Infanrix-hexa vaccines is the prevention of infection caused by hemophilic bacillus.

Case 7***
The child is 3 months old, sick for the second day: difficulty in nasal
breathing, excessive mucous discharge from the nose, rare dry
cough, temperature 37.5 °C. From the third day of the illness, the condition worsened, the cough became obsessive, shortness of breath appeared and quickly
increased to 80 in 1 minute, the temperature was 37.3 °C. The child's mother
went to an ambulance.
Upon examination of the child by the SMP doctor, the condition was assessed as severe.
The skin, mucous membranes of the lips and oral cavity are cyanotic.
Breathing is noisy, "puffing", shallow, with difficulty
exhalation and participation of auxiliary muscles in the act of breathing,
with inflating of the wings of the nose, retraction of the supraclavicular pits and interstitial
spaces. Well-being suffers to a lesser extent.
The chest is swollen, above the lungs there is a boxy tinge
of percussive sound, the boundaries of cardiac dullness are reduced, the upper
boundaries of the liver and spleen are shifted down by one intercostal space.
During auscultation, breathing is harsh, exhalation is sharply prolonged, and on inhalation
and exhalation, a mass of finely
bubbly and crepitating wheezes is heard from both sides from the front and back. Heart tones are sonorous, frequency
heart rate 172', I-tone accent over the pulmonary
artery. The boundaries of the heart correspond to age. Other organs
and systems during physical examination without special features.
Task
1. Make a preliminary diagnosis.
2. What syndrome causes the severity of the condition?
3. Determine the indications for hospitalization.
4. What additional research methods should be recommended?
5. Prescribe a treatment.
6. What is the prevention of the disease?
The answer to case 7
1. Bronchiolitis, severe form. Respiratory failure 2.
2. Bronchial obstruction syndrome.
3. Hospitalization is indicated due to the severe condition
of the patient and the presence of bronchial obstruction.
4. Pulse oximetry, general blood analysis, chest X-ray.
5. Oxygen therapy through nasal catheters or head
packs, moistening, hydration, superficial nasal
aspiration, spraying of 3% hypertonic solution through a
nebulizer, berodual - 1 drop / kg, in the absence of the effect of
berodual inhalation, stop.
6. Breast-feeding, exclusion of secondhand smoke,
disinfection of hands, palivizumab (according to indications).

Case 9 **

Girl, 5 years old, constipation is noted from the first year of life, during the last year, stool occurs after 4-5 days, mainly after a cleansing enema, self-defecation is rare, difficult, incomplete. For 6 months encoprese is observed.
The child was full-term, the second in the family, artificial feeding from 2.5 months, was observed by a neurologist with a diagnosis of increased neuro-reflex excitability syndrome.
At the age of 3, she suffered an intestinal infection of unknown etiology.
The mother is 38 years old and suffers from constipation. Father is 40 years old, healthy; the brother is 13 years old, healthy.
Examination: weight 16 kg, height 105 cm, pale pink skin, blue under the eyes, swollen abdomen, painful along the colon, sigma dilated, thickened, fecal stones. Liver + 1.5 cm below the edge of the costal arch, slightly positive vesicular symptoms. There are no changes in other organs.
General blood test: er — 4.0x1012/L, Hb — 118 g/L, Le — 6.2 x 109/L, e — 4%, n/I — 3%, s/I — 47%, L — 40%, M — 6%, ESR — 11 mm/hour.
General urinalysis: color — light yellow, relative density of urine — 1018, protein — no, sugar — no, ep.pl. — a small amount, er. — no, mucus — a little.
Coprogram: dark brown color, well—formed; muscle fibers — in small quantities; intracellular and extracellular starch — a lot, iodophilic flora — a significant amount, indigestible vegetable fiber — a little, mucus - a lot, leuc. — 1-2 per day.
Irrigography: the colon is hypotonic, the sigmoid is significantly elongated and dilated. The rectum is wide in diameter, hypotonic, and on examination, a small portion of barium is excreted from the anus. Emptying from the intestine is incomplete, the pattern of the colon mucosa is rearranged, smoothed, and gaustation in the distal the colon is poorly expressed.
Task
1. What kind of pathology can you think about?
2. Encopresis primary or secondary?
3. Treatment plan.
The answer to case 9
1. Dolichosigma. Chronic colitis in the acute stage. Encopresis.
2. Secondary encopresis.
3. Treatment plan: repeated cleansing enemas with salt water (1 tablespoon of table salt per 1 liter of water at room temperature, 200-500 ml of solution should be administered in the enema) until complete emptying of the colon within a few days (before relief of endocopresis). Microclysms "Microlax" allowed from birth, but it is an emergency medicine, not long-term use, has an irritating effect on the intestinal mucosa).
Then treatment with lactulose or macrogol preparations.
Phase 1 – increasing the dose.
The child is given lactulose or macrogol once a day in an increasing dose until mild diarrhea appears (type 5-6 on the Bristol Stool Scale).
Phase 2.
The child takes a laxative for several months in a dose, maintaining a soft stool. During this time, the rectum, which is no longer stretched by dense feces, becomes toned, the child weans off the association defecation = pain, and during this time the child adapts to the defecation regime: every time after breakfast or after dinner.
Phase 3 – gradual dose reduction.
The drinking regime is 1000 ml per day. To introduce dietary fiber into the diet (gray cereals, stewed vegetables, dried apricots, prunes, in-fat). Abdominal massage, physical therapy.

Case 10 ***

A boy, 7 years old, became acutely ill tonight.
The temperature rose to 38 °C, abdominal pain appeared. I had
vomiting once, loose stools with mucus. The ambulance took
him to the infectious diseases department with suspected dysentery. On examination, the patient's forced position on his right side with his legs pulled up to his stomach, and a pained expression on his face. The skin is pale, the tongue is dry, covered with a thick coating, slight pharyngeal hyperemia. In the lungs, breathing is vesicular, and the heart tones are distinct.
Palpation of the abdomen determines soreness and muscle tension.
abdominal wall, a positive symptom of Shchetkin-Blumberg.
The stool in the emergency room is liquid, with an admixture of mucus.
task
1. Make a preliminary diagnosis.
2. Your medical tactics.
The answer to case 10
1. Acute appendicitis.
2. Immediate admission to the surgical department.

Case 12***

A boy from healthy parents was admitted to the clinic at the age of 1 month and 11 days.
Anamnesis data: Pregnancy 1, proceeded without complications. The birth is urgent, independent. Body weight at birth is 3550 g, body length is 52 cm. He took the breast well, sucked actively. In the 1st month of his life, he gained 700 g in weight.
At the age of 1 month and 7 days, profuse vomiting suddenly appeared, which was repeated daily 3-4 times a day. After 2 days, constipation and decreased urination appeared.
Objective examination data: the condition of the child upon admission to the clinic of moderate severity. Calm, sucking greedily. There is abundant vomiting from the fountain. The weight deficit is 16%. The skin is pale pink, dry. There is a decrease in the subcutaneous fat layer and tissue turgor. In the lungs, breathing is puerile, there is no wheezing. The breathing rate is 40 per minute. The tones of the heart are clear and loud. The heart rate is 140 per minute. The stomach is well-shaped. In the epigastric region, gastric peristalsis in the form of an hourglass is clearly visible. A thickened pylorus the size of a plum stone is palpated. The number of urinations is 7 times a day.
Biochemical blood test: serum protein – 75.2 g/l, blood pH - 7.60, VE - + 8.5 mEq/L, SB -31.2 mEq/L, pCO2 - 31 mmHg.
X-ray of the gastrointestinal tract with barium revealed an enlarged stomach and revealed a barium retention of more than 24 hours.
Task:
1. Make a diagnosis.
2. What are the symptoms characteristic of this disease?
3. Does the child need additional research methods to clarify the diagnosis?
4. Specify the treatment strategy.
5. How and with what to feed such a patient?
The answer to problem 12
1. Congenital pyloric stenosis.
The diagnosis is made on the basis of medical history data.:
- Profuse, repeated vomiting in a fountain at the age of 1 month. 7 days, with simultaneous absence of bowel movements, which may indicate a high intestinal obstruction. Before that, the child ate well, gained 700 g in weight.
Objective inspection data:

- Symptoms of hypotrophy and exsicosis: a 16% body weight deficit, a decrease in the thickness of the subcutaneous fat layer and tissue turgor, dry skin, thirst (sucks greedily).
- Segmental peristalsis of the stomach in the form of an hourglass is visible (a symptom characteristic of pyloric stenosis).
- A thickened pylorus the size of a plum stone is palpated (hypertrophy of the muscular layer of the pylorus).
Laboratory and instrumental research data:
- "Blood clot" syndrome - an increase in protein levels (associated with a decrease in BCC),
- Decompensated metabolic alkalosis (a characteristic change in blood glucose due to a large loss of gastric juice and acid bases with vomiting).
- An increase in the size of the stomach and retention of the barium mixture in the stomach for more than 24 hours (which is typical for pyloric stenosis). A barium retention of more than 8 hours may already indicate a high intestinal obstruction, possibly associated with a malformation of the pyloric part of the stomach.
2. The symptoms are listed in paragraph 1.
3. In this case, the diagnosis is clear and does not require additional examination, however, a child in need of surgical treatment is shown:
- A general blood test with hemosyndrome (platelets, clotting time, bleeding time).
- Biochemical blood test with mandatory determination of urea, electrolytes, protein.
- Chest X-ray (thymomegaly).
- neurosonography (ultrasound examination of the brain through a large fontanel), to exclude pathology associated with birth trauma.
- Electrocardiography.
- Esophagogastroduodenoscopy is possible if no radiopaque examination of the gastrointestinal tract has been performed.
4. Surgical treatment, Fred-Ramstedt pylorotomy with mandatory preoperative preparation (correction of water and electrolyte disorders).
5. Before surgery, fractional feeding with breast milk or an adapted mixture of 20-30 ml every 2 hours, the necessary energy and water needs are provided by infusion therapy, after surgery, feeding begins after 4 hours, 10 ml every 2 hours, daily the amount of milk in feeding is increased by 10 ml. Usually, the amount of nutrition is adjusted to the age norm in 10 days (with an uncomplicated course of the postoperative period).

Case 14 **

A 9-year-old girl

She has been ill for 2 months. After suffering from acute respiratory viral infections, the girl began to complain of thirst, increased appetite, weight loss, and frequent urination. 5 days before the hospitalization, the condition deteriorated sharply, abdominal pain, vomiting, drowsiness, and the smell of acetone from the mouth appeared. On the eve of hospitalization, shortness of breath, repeated vomiting with abdominal pain, and constipation appeared.

Anamnesis data: a child from the 2nd, normal pregnancy and normal birth. Body weight at birth is 3500 g, length is 50 cm. She grew and developed satisfactorily. Previous illnesses: acute respiratory viral infections 2 times a year, chickenpox at the age of 6. Vaccinations are made according to age. My maternal grandmother has type 2 diabetes.

Objective examination data. Upon admission, the condition is severe: severe weakness, sleeps, but when contacted, answers monosyllabic questions and immediately falls asleep. The skin is dry, and the turgor of the tissues is reduced. Dyspnea. Harsh breathing during auscultation. Tachycardia, heart sounds are muffled. Blood pressure is 90/50 mmHg. The pillar. The abdomen is painful on palpation. Liver + 1.5 cm from under the costal arch. Urination is frequent, and the vulva is hyperemic.

Examination data: Blood sugar 30 mmol/l, Sugar in urine (300 ml) 5%, acetone ++++, CBS: PH 7.1, VE – (-20).

Task

1. Make a diagnosis.

2. Continue the examination.
3. Prescribe treatment.
4. Substantiate the phase of the disease.
5. Give an assessment of the CBS indicators.
Answers to case 14
1. Type I diabetes mellitus, familial, grade II ketoacidotic coma, vulvitis.
Rationale: thirst, increased appetite, weight loss, frequent urination, dry skin, acetone odor from the mouth, progressive increase in these symptoms, drowsiness, vomiting, inactivity, shortness of breath, abdominal pain, enlarged liver, vulvar hyperemia, blood sugar 30 mmol / l, acetone in urine ++++, Grandmothers have diabetes mellitus, which is typical for type 1 diabetes.
Constipation, repeated vomiting, shortness of breath, abdominal pain, severe weakness, and metabolic decompensated acidosis are characteristic of grade II diabetic ketoacidotic coma.
2. Blood sugar tests every 3-4 hours, glucosuric profile, CBS every 3-4 hours biochemical blood analysis (protein and fractions, urea, cholesterol, lipoproteins, bilirubin, transaminases, electrolytes), ECG.
3. Infusion therapy: 5-10% glucose + saline solution, 4-5% K chloride solution, panangin, heparin, vitamin C.
4. Constipation, repeated vomiting, shortness of breath, abdominal pain, severe weakness, metabolic decompensated acidosis are characteristic of diabetic ketoacidotic coma of the II degree.
5. Decompensated metabolic acidosis (pH – 7.1, VE-(-20).

Case 15**
The girl, 12 days old.
Anamnesis data: a child from the 1st, normal pregnancy, from an urgent delivery. Birth weight 3600, length 52 cm. She screamed immediately, was put to her chest after 12 hours, and sucked actively. The parents are young and healthy. Heredity is not burdened.
At birth, attention was drawn to the irregular structure of the external genitalia: the labia majora resembled a scrotum, and the clitoris was hypertrophied. After being discharged from the 8th day of life, the child began vomiting, which has intensified in recent days, the girl began to refuse to feed, noticeably lost weight.
Objective examination data: the condition is severe, sluggish, vomiting continues, tissue turgor is reduced, the skin is dry, pigmentation in the nipple area. The large fontanel is sunken. Breathing is harsh. The heart tones are moderately muted. The abdomen is soft, with slight pain in the epigastric region. The stool is diluted 1 time. Urination is rare.
Survey data: Biochemical blood test: total protein 65 g/l, urea 6.4 mmol/L, cholesterol 4.2 mmol/L, total bilirubin 4 mmol/L, potassium 6.8 mmol/L, sodium 129.0 mmol/L, Ca 2.4 mmol/L, AlT – 20 Units/l.
Task
1.Make a dignosis
2. What indicator confirms the diagnosis?
3. Prescribe treatment.
4. Make a differential diagnosis
5. Prognosis in case of incorrect diagnosis of this disease.
Answers to case 15
Congenital dysfunction of the adrenal cortex, a losing form. The clinic notes an irregular structure of the genitals (labia majora resemble a scrotum, the clitoris is hypertrophied, pigmentation around the nipples). Vomiting, exsicosis are noted, hyperkalemia and hyponatremia were detected in a biochemical blood test.
2. To confirm the diagnosis, it is necessary to determine 17-hydroxyprogesterone in the blood.
3. Glucocorticoids and mineral corticoids are prescribed to correct the hormonal profile.
4. The wasting form of congenital adrenal cortex dysfunction should be differentiated from pyloric stenosis.
5. With late treatment, children tend to remain stunted for life.

Case 19 *
A 7-year-old girl was admitted to the hospital complaining of pain in the lumbar region and frequent urination.

Medical history data: a child from the first pregnancy, was born on time. The neonatal period was uneventful. She suffered from chickenpox and rubella from childhood infections. He often suffers from acute respiratory viral infections.
The girl is periodically bothered by abdominal pain; her temperature often rises; sometimes painful urination is noted.
Objective examination data: upon admission to the hospital, the condition is of moderate severity. The skin is pale, the temperature is 38 ° C. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 30 per minute. The tones of the heart are clear and loud. The heart rate is 88 per minute. Pasternatsky's symptom is positive on both sides. Urination is frequent and painful.
Survey data:
Total blood count: Hb - 114 g/L, er - 4.5x 1012/L, leuc. - 18.5 x 109/L, n/I - 10%, s - 70%, L - 22%, m - 9%, ESR - 30 mm/hour.
General urinalysis: alkaline reaction, protein 0.06, white blood cells – completely in the field of vision, red blood cells – 0-1 in the field of vision, bacteria - a lot.
Kidney ultrasound: the kidneys are positioned correctly, the size of the left kidney is larger than normal. The cup-pelvis system is expanded on both sides, more on the left. Suspected doubling of the left kidney.
Task
1. Make a diagnosis and justify it.
2. Specify additional research methods to clarify the diagnosis.
3. What is the purpose of cystography?
4. What kind of research should be conducted to prescribe adequate therapy?
Answers to case 19
1. Secondary chronic pyelonephritis on the background of abnormal kidney development, the stage of exacerbation. - Chronic, as there is a history of repeated fever, combined with abdominal pain and painful urination - Secondary, because ultrasound revealed an expansion of the collecting systems of both kidneys and a suspected doubling of the kidney on the left (developmental anomaly) - Pyelonephritis is in the acute stage, because in the anamnesis and upon admission there are phenomena of general infectious toxicosis, a positive symptom of Pasternatsky, pronounced leukocyturia and bacteriuria, an inflammatory reaction of peripheral blood
2. Microbiological examination of urine (microflora typing taking into account sensitivity to antibiotics), Zimnitsky urine analysis (pyelonephritis is characterized by a moderate restriction of the concentration ability of the kidneys), cystography, cystoscopy according to indications, nephroscintigraphy 6 months after the relief of pyelonephritis attack (the presence of foci of renal parenchyma wrinkling in a child with a chronic inflammatory process)
3. According to ultrasound (enlargement of the collecting kidney system), the presence of vesicoureteral reflux cannot be excluded.
4. Determination of the sensitivity of microflora to antibiotics (antibioticogram)

Case 20 *
A 5-year-old girl was admitted to the hospital complaining of swelling.
Anamnesis data: a child from the first normal pregnancy, delivery on time. Birth weight 3300 gr., length 52cm. Physical psychomotor development without special features. Previous illnesses: chickenpox, often has acute respiratory viral infections. Allergic history: atopic dermatitis up to 3 years old.
After suffering from acute respiratory viral infections, the girl developed swelling on her face and rare urination. The district doctor diagnosed Quincke's edema and prescribed suprastin (chloropyramine). Despite the ongoing therapy, the swelling increased, and the girl was hospitalized.
Physical examination: upon admission to the hospital, the condition is severe. The skin is pale. Pronounced swelling of the face, lower leg, feet, anterior abdominal wall, ascites. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 34 per minute. The heart tones are muted. Pulse is 110 beats per minute,

blood pressure is 90/60 mmHg. The abdomen is soft and painless. Liver +2.0 cm from under the edge of the costal arch. He rarely urinates. She excreted 180 ml of urine per day.
- In the urine analysis, protein 8.0 0/00, leukocytes 2-3 in the field of vision, red blood cells are absent.
- Complete blood count: Hb - 127 g/L, ER - $3.8x10^{12}$/L, Le 10.2 $x10^{9}$/L, n 1%, s 36%, L 54%, e - 2%, m - 8%, ESR - 50 mm/hour.
Task
1. Make a diagnosis
2. Justify the diagnosis.
3. What biochemical blood parameters are necessary to clarify the diagnosis?
4. Diet for this disease
5. Prescribe a treatment.
Answers to case 20
1-2.Acute glomerulonephritis with nephrotic syndrome (idiopathic nephrotic syndrome).
Preschool age, the onset of the disease after acute respiratory viral infections, severe edematous syndrome, oliguria, massive proteinuria, and accelerated ESR are typical of nephrotic syndrome (morphologically, it is most likely a disease of minimal changes)
3. Total protein and protein fractions (pronounced hypoproteinemia in combination with hypoalbuminemia can be expected), lipidogram (compensatory increase in cholesterol and triglycerides).
Elevated urea, creatinine, and blood electrolytes (hyperkalemia is possible) may indicate the development of acute renal failure.
Coagulogram (tendency to hypercoagulation)
4. Exclusion of salt and meat (contains sodium chloride), protein restriction (with massive proteinuria), fluid intake in accordance with diuresis and the patient's desire.
5. Bed rest for the period of severe edema, then do not limit physical activity (prevention of osteoporosis)
- Diet (see above),
- Short-course antibacterial therapy for the period of severe edema (prevention of bacterial complications-pneumonia, peritonitis with anasarca).
- Immunosuppressive therapy – prednisone 2 mg / kg or 60 mg/ m2 of body surface area for 6 weeks daily, followed by a switch to an alternating regimen of 1-1.5 mg / kg or 40 mg / m2 for 6 weeks, followed by gradual withdrawal with normal urine tests.
- Anticoagulants, antiplatelet agents (heparin, curantil) to prevent microthrombosis in severe hypovolemia
- Diuretics - extremely careful administration of loop diuretics against the background of adequate hydration of the patient (intravenous drip of rheopolyglucine followed by slow administration of lasix 1-5 mg / kg in 150 ml of glucose)
- In the future, proton pump inhibitors (side effects of corticosteroids on the gastrointestinal tract)

Case 21 **
The girl, 11 years old.
Medical history data: from the 2nd pregnancy, delivery in term. The neonatal period was normal. After 1 year, the child periodically had a rash and Quincke's edema after ingestion of eggs, chocolate, oranges. He often suffers from acute respiratory viral infections.
She suffered from follicular tonsillitis 15 days before her hospitalization. She received antibiotic treatment and drank a lot, including orange juice. On the 14th day of the illness, the child developed pain in the ankle joint and a rash on his legs.
Physical examination upon admission: on the shins, thighs, buttocks, symmetrical, more on the extensor surfaces and around the joints, there is an abundant exudative hemorrhagic rash. The ankle joints are swollen. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 20 per minute. The tones of the heart are sonorous. The pulse rate is 80 per minute. Blood pressure is 110/60 mmHg. The abdomen is soft and painful on palpation around the navel, at the point of the gallbladder. The stool was after the enema, decorated, with a small amount of mucus.

The formula of sexual development: Ma2, P2, A2, Me0.

- Blood test: Hb-126 g/l, er.-4.0x10^{12}/l, Pt -322x10^{9}/l, Le 7.4x10^{9}/l, p-6%, s-64%.eos.-8%, L.-18%.m-4%, ESR-24 mm/hour.

The bleeding time according to Duque is 3 minutes, the clotting time according to Burger: the beginning is 1 minute, the end is 3 minutes.

Task

1. Make a diagnosis.
2. What clinical syndromes are characteristic of this disease?
3. The examination plan.
4. Treatment plan.
5. What factors could contribute to the development of the disease?

Answers to case 21

1. Hemorrhagic vasculitis with skin, joint and abdominal syndrome. The diagnosis is based on anamnesis (food allergy to eggs, chocolate, citrus fruits). This disease developed 2 weeks after suffering a sore throat. In the clinic of this child's disease, typical manifestations on the skin are exudative hemorrhagic rash on the thighs, lower buttocks, soreness and swelling of the ankle joints, cramping abdominal pain typical of abdominal syndrome.
2. a) cutaneous, b) articular, c) abdominal, d) renal
3. a) Blood test + bleeding time and clotting time, b) coagulogram, c) stool for coprology,
d) urinalysis e) biochemical blood analysis (protein and its fractions, urea, creatinine, potassium, sodium)
4. a) Diet 1
b) detoxification therapy, c) heparin therapy, d) desensitizing therapy
e) rehabilitation of foci of infection.
5. a) allergic potential of the body (exudative diathesis, food allergy),
b) frequent acute respiratory viral infections, c) follicular sore throat suffered in 2 weeks.

Case 23**

A 3-month-old child was admitted to the hospital with complaints of vomiting, frequent loose stools, and refusal to eat.

From the anamnesis of life: a child from 1 normal pregnancy. Delivery on time, physiological. He screamed at once. Birth weight 3300, length 51 cm. The newborn period proceeded smoothly. She has been on artificial feeding since 1 month due to hypogalactyly in her mother. It feeds on an adapted mixture, by the hour – 6 times a day and sucks 130-140 g. From 2 months it receives juices, before illness – 30.0 ml. A few days ago, they began to give cottage cheese for 5 g.

He gained weight: for the 1st month - 600 g., for the 2nd – 800 g., for the 3rd - 750 g. He holds his head for 2 months, watches his eyes, hums. I haven't been ill until now.

Epidemiological history: there were no acute gastrointestinal diseases in the family. Medical history: became acutely ill, fever increased to 37.5, vomiting appeared, loose stools up to 10 times on the first day of the disease. Upon examination by the district pediatrician: the temperature is normal, the state of health is slightly disturbed. The stool was examined – mushy, with an abundant admixture of mucus and greenery. When the mother was questioned, it turned out that she had made cottage cheese from kefir the day before and for the first time gave the child 20 g. It was recommended to pause feeding for 6 hours and reduce the feeding dose by half, and give the baby a drink of slightly sweetened weak tea. Over the next 2 days, the child's condition continued to deteriorate; he had a temperature of 37.2-37.5, vomiting up to 3-5 times a day, and stool increased up to 20 times. He was re-examined by a doctor and hospitalized.

Clinical examination data: temperature 37.0. The child's condition is very severe, sluggish. The scream is almost soundless, weak. Motor-inactive. The skin is pale, with a “marble” pattern, slightly moist to the touch. The turgor of the tissues is sharply reduced. The skin on the inner thigh gathers into a fold. The large fontanel sinks in. The facial features are pointed. The breathing rate is 40-45 per minute. There were no respiratory abnormalities. The pulse rate is 150 beats per minute, the heart tones are slightly muffled. Sucks sluggishly,

reluctantly. It does not suck out more than 30 ml. Vomiting occurs when trying to give more. The tongue is covered with a whitish coating, but moist. The abdomen is swollen, and rumbling is pronounced on palpation. There is a painful reaction to palpation of the abdomen. The liver protrudes from under the edge of the costal arch by 2 cm. The spleen is not palpable. Stools for the first day of stay in the department up to 20 times, liquid with an admixture of mucus and greenery, with a small amount of feces. The anus opens easily when the buttocks are dilated.
Urination up to 5-6 times a day, in small portions.
In the neuropsychiatric status: sluggish, muscle tone is reduced, tendon reflexes are alive. He reacts to the examination with a weak cry.
Blood test: Hb-140 g/l, er. -5.0x1012 , leuc. – 15x109 , Pt. -15%, S.I. -55%, L. – 25%, M. – 5%, ESR – 20 mm/hour.
2. Blood: pH – 7.32, pCO2 – 35, VE – (-) 7.0
3. Biochemical blood test: total protein – 70.0 g/l, sodium – 128 mmol/L, potassium – 4.0 mmol/L.
Task
1. Identify the main clinical syndromes in the clinical picture of the patient's disease.
2. What are the most likely causes of the disease in our patient?
3. What is the main reason for the severity of the patient's condition, and what causes it?
4. Upon admission, the child was weighed, and his body weight turned out to be 5,000 g.
a) what is the degree of exicosis?
b) what is the likely type of dehydration in this patient, indicate typical clinical and laboratory signs?
5. Formulate a detailed diagnosis of our patient's disease at this stage of his examination.
6. Name the main directions of treatment measures for this patient.
7. To restore water-salt metabolism:
a) determine the total amount of fluid per day needed by this child to eliminate dehydration.
b) what components will this estimated amount of fluid consist of for this child on the first day of treatment,
c) list the therapeutic solutions needed for infusion therapy of this patient.
Answers to case 23
1. The child has the following syndromes: - infectious toxicosis, - exsicosis, - regurgitation and vomiting.
2. The most likely cause of the disease is an intestinal infection, however, it must be remembered that consuming kefir in such large quantities can lead to functional dyspepsia. In the future, it is necessary to make a differential diagnosis between them using additional clinical and laboratory data.
3. The main cause of the severity of the condition is associated with the syndrome of regurgitation and vomiting, which is primary, infectious toxicosis, exicosis, metabolic disorders are associated with loss of fluid and electrolytes directly due to dyspeptic disorders.
4.
a) body weight deficiency is defined as follows: the proper body weight at this age is:
3300+600+800+750=5450 G. We know the actual body weight At admission, the child's weight turned out to be 5000 g. This means that in 3 days the child lost 5450-5000 = 450 g 450x100: 5450= 8.26%, which corresponds to grade II exicosis.
b) hypotonic type of exsicosis (lethargy, adynamia, decreased muscle tone, tachycardia, deafness of heart tones, low serum K levels).
5. Intestinal infection of unknown etiology, intestinal toxicosis with grade II exicosis, hypotonic type.
6. Unloading of food: an introductory tea break for 8-12 hours, then an adapted low-lactose mixture (fermented milk) - fractional meals of 20-30 ml every 2 hours 10 times a day. Fractional rehydration with Rehydrone, given the presence of repeated vomiting in very small amounts.
- Etiotropic therapy: parenteral cephalosporins, oral aminoglycosides.
- Pathogenetic therapy: correction of water and electrolyte disorders – rehydration infusion therapy with glucose-saline solutions, polarizing mixture (glucose-insulin-potassium mixture), fight against acidosis.
- The second stage is the use of bacteriophages, probiotics, and enzymes.
7. The total amount of fluid is about 190-200 ml / kg of body weight.

Necessary components:
- Colloidal solutions: plasma, 10% albumin solution, rheopolyglucine,
- Crystalloid solutions: 10% glucose solution, Ringer's solution, saline solution, 4-5% potassium chloride solution, B vitamins.

Case 24 **
The boy is 2 months old.
Medical history data: a child from 4 pregnancies to 2 births. The previous pregnancy ended with a medical abortion. The real pregnancy occurred 6 months after the abortion. Course: toxicosis of the 2nd half (nephropathy with edema and proteinuria, in the 3rd trimester she suffered from influenza with symptoms of infectious toxicosis).
Birth at 40 weeks, spontaneous, early discharge of amniotic fluid (10 hours before the rest period), green, cloudy waters. The duration of labor is 4 hours. The child screamed immediately, was applied to the breast for 3 days, took the breast badly, sucked sluggishly. The Apgar score is 7/8 points. Birth weight 4500, length 54 cm. Physiological weight loss - 250 g, by the time of discharge from the hospital, the weight had not recovered. From the moment of birth, there was at first an abundance of regurgitation, and at the time of hospitalization - after almost every feeding.
The data of an objective examination in the admission department: age 2 months, the child is restless, blushes when screaming, there is a tilting of the head and tension of the large fontanel. After adapting to the examination, he calmed down and reacts with positive emotions. The head is dolichocephalic in shape with an overhanging occiput, the seams are not closed, a large fontanel 2x2 cm, slightly tense. Moderate chin tremor, clonus of the lower extremities, expansion of the tendon reflex zone. Grefe's symptom is determined.
1. A presumptive diagnosis?
2. What diseases should be differentiated from?
3. The optimal examination plan?
4. Treatment program?
The answer to problem 24:
1. The child has a perinatal CNS lesion of hypoxic origin with intracranial hypertension syndromes, increased neuro-reflex excitability, regurgitation syndrome. The diagnosis can be established on the basis of medical history data.:
- This pregnancy occurred a short time after the abortion.
- Burdened pregnancy (nephropathy, infectious diseases with symptoms of toxicosis).
- Early discharge of amniotic fluid, they are green, cloudy (signs of chronic intrauterine hypoxia).
- Rapid delivery (duration 4 hours).
- Low score on the Apgar scale (8/9 is acceptable, 9/10 points are ideal)
- Large fetus (the combination of rapid delivery and large fetus creates the prerequisites for hypoxic-traumatic damage to the central nervous system)
Objective inspection data:
Restlessness, tilting of the head and tension of the large fontanel (a sign of intracranial hypertension), overhanging occiput (a sign of intrauterine hypoxia), chin tremor, clonus of the lower extremities, expansion of tendon reflexes (a sign of increased neuro-reflex excitability), Grefe's symptom (a sign of intracranial hypertension).
2. In all cases of intracranial hypertension, especially with tension of the large fontanel, tilting of the head, symptoms of hyperesthesia, it is necessary to make a differential diagnosis.:
- With meningitis - With intracranial hemorrhage - With neurotoxicosis (especially if there are signs of infection).
3. General blood test (to exclude bacterial infection).
Biochemical blood test (electrolytes, protein).
Neurosonography (ultrasound examination of the brain through a large fontanel).
Fundus examination (changes with severe intracranial hypertension)

Consultation with a neurologist
When symptoms of infectious toxicosis are added, a lumbar puncture (diagnostic and therapeutic measure) is indicated.
4. If it is not meningitis or subarachnoid hemorrhage, then all therapeutic measures are aimed at establishing a balance between the production and outflow of cerebrospinal fluid, therefore they are prescribed:
- Diuretics that selectively reduce the formation and increase the outflow of cerebrospinal fluid (diacarb at an initial dose of 60 mg in the morning according to the scheme -3 days to give, day break). Glycerol.
- Asparkam, panangin (to compensate for the resulting deficiency of K and magnesium).
- Glycine (to improve metabolic processes in the brain
- Sedative drugs: phenobarbital, phenibut (to lower the threshold of sensitivity from external receptors).
- Since the patient has regurgitation syndrome associated with dyskinesia of the gastrointestinal tract due to dysregulation of pyloric muscle tone against the background of increased neuro-reflex excitability, it is necessary to prescribe neuroveget blockers (2% solution of diprazine, or aminazine at a dose of 1 mg / kg body weight, a single dose 2 times a day i / m). After feeding, keep the patient upright for 20-30 minutes to remove air from the stomach (aerophagy), prescribe an antireflux mixture for 2-3 weeks.

Case 25 **
The newborn is 9 days old.
Anamnesis data: born from the 1st, normal pregnancy, in term, with a body weight of 3050 g, 50 cm. The umbilical cord residue disappeared on day 4, and the umbilical wound healed quickly. The child had toxic erythema in the maternity hospital. Discharged from the maternity hospital on the 5th day with a body weight of 2,950 g. He was breastfed. There were small pustules on the skin of the mother's breast.
On the 6th day of the child's life, single pustules the size of a pinhead appeared on his face, filled with yellowish contents. The mother didn't think much of it. The child was not bathed.
Objective examination data: 3 days after discharge from the maternity hospital, the district pediatrician noted the presence of multiple pustules on the child's head, trunk, buttocks, and limbs. There were dried pustules with the formation of crusts on the face. The body temperature did not rise, the breathing in the lungs was clear, purulent, the number of breaths was 44 per minute. The heart tones are clear, pure, and the heart rate is 144'. The abdomen is soft, painless, the liver is + 2 cm, the spleen is not palpable. The breast sucks willingly, stools 3-4 times a day without pathological impurities.
Task:
1. Make a diagnosis.
2. Name the factors contributing to the development of this disease.
3. Which pathogen is most often caused by this disease?
4. Is it possible to bathe a child?
5. Prescribe a treatment.
The answer to problem 25:
1. Vesiculopustulosis. The diagnosis can be made based on medical history data.:
- The presence of small pustules on the skin of the breast (a possible cause of infection).
- The appearance on the 6th day of the child's life of single pustules the size of a pinhead, filled with yellowish contents (typical time of occurrence and localization).
- Objective inspection data:
- Multiple pustules on the head, trunk, buttocks, limbs, dried pustules with crusts.
- There are no symptoms of infectious toxicosis, which is typical for vesiculopustulosis.
2. - Decreased immune response due to low IdM content at birth, imperfect phagocytosis.
- Features of the newborn's skin: thin, vulnerable, the epidermis easily separates from the dermis, participates in the release of toxins from the body, incomplete protective function.
- Colonization by microorganisms of the newborn at birth with the formation of a normal ratio of dominant and subdominant flora (75-90% lactic acid: 25-10 conditionally pathogenic). The violation leads to pathological colonization with a predominance of conditionally pathogenic flora.

- Bacterial infection in the mother (pustules on the mammary gland).
3. Staphylococcus aureus, other cocci, opportunistic flora.
4. You can bathe with the addition of a solution of permanganate K (pale pink color) to the water and using baby soap.
5. Each element of the vesiculopustulosis should be opened with a sterile needle and treated with solutions of aniline dyes (brilliant green solution, gentian violet, Castelani paint, an aqueous solution of methylene blue), antibiotics are prescribed only for abundant rashes with an unfavorable premorbid background

Case 27*

The girl was transferred to a children's hospital at the age of 9 days from the maternity hospital.
Medical history data. A child from 2 pregnancies (the 1st pregnancy ended with a medical abortion 7 years ago, the 2nd pregnancy is real). Labor on the 1st, at the 39th week, amniotomy, polyhydramnios, light waters, anhydrous period of 9 hours and 40 minutes.
The condition at birth is severe, the cry is very weak, the Apgar score is 3/5 points. Birth weight 3150 g, length 50 cm, pale yellow skin, swelling of limbs, trunk. In the lungs, breathing is puerile, there is no wheezing, the number of breaths is 50 per minute. The heart tones are muted, the heart rate is 158 per minute. The abdomen is enlarged, the liver is 7 cm below the costal arch along the mid-clavicular line, and the spleen is 6 cm below the rib. The stool is meconial, the urine is light yellow.
The mother has a B(III) Rh(-) blood type, the child has A(II) Rh(+). During pregnancy, the mother had a high titer of antiresus antibodies detected once (one month before delivery).
At birth, the child's total bilirubin is 185 mmol/l, hemoglobin is 40 g/l. At the 20th minute of life, a therapeutic measure was performed, after which the condition improved somewhat due to a decrease in edematous syndrome. However, the jaundice persisted, and in the first four days of life, a total of 5 such therapeutic measures were carried out. From the 7th day of life, jaundice began to decrease, edema decreased by the fifth day of life. On day 7, she had a weight of 2750 g, after that she began to gain weight gradually. The umbilical cord residue disappeared on the 7th day.
Objective examination data upon admission: body temperature 36.5 degrees, weight 2800, head circumference 33.5, chest 31 cm.
The condition is severe, the cry is quiet, there is lanugo on the shoulders and auricles, the umbilical ring is located low. The skin is icteric, dry, cyanosis of the nasolabial triangle, cyanosis of the feet, palms. Umbilical wound with serous discharge, there is swelling of the lower part of the trunk and limbs. The large fontanel is 1x1 cm. In the lungs, breathing is puerile, there is no wheezing. The number of breaths is 44 per minute. Heart tones are loud, systolic murmur is at the top, and the boundaries of relative cardiac dullness are within the age norm. The heart rate is 160 per minute. The abdomen is soft, the liver is +3 cm, the spleen is +1.5 cm. The stool is yellow, the urine is light. Motor activity is reduced, reflexes of newborns are reduced, an unstable symptom of Grefe.
The child is being artificially fed with an adapted 70 ml formula 7 times a day.
Complete blood count: Hb 116 g/l, er. 4.1x1012/l, platelets 143 x 109/l, Le -8.3x109/l, myel.-2, metamyel.-1, P.ya.-2, S.ya.-60, E.-1, L.-26, M.-7. cell size-1, ESR-4 mm/hour.
Blood biochemistry: protein 70 g/l, urea 4.2 mmol/L, cholesterol 3.8 mmol/L, direct - no bilirubin, indirect – 250 mmol/l.
Task:
1. Make a diagnosis.
2. What causes the severity of the child's condition?
3. Schedule a further examination.
4. Which treatment event was held in the hospital 5 times. Other methods of treating this disease?
5. Prognosis.
The answer to case 27
1. Edematous form of hemolytic disease of newborns.

Rationale: incompatibility of the Rh factor in the fetus and pregnant woman, high titers of antiresus antibodies, edema, enlarged liver, low hemoglobin, high indirect bilirubin.
2. The severity of the condition is due to a high level of total bilirubin 185 mmol / l, a low hemoglobin content of 40 g / l, as a result of which hypoxia of the newborn is noted with a low score on the Apgar scale of 3/5 points. Increasing anemia and hypoxia required a 5-fold replacement blood transfusion.
3. Examination plan: monitoring of hemoglobin, erythrocytes, indirect and direct bilirubin levels to monitor the rate of hemolysis and prevent the possibility of bilirubin encephalopathy), determination of the hourly increase in bilirubin, observation by a neurologist.
4. Replacement blood transfusion was performed 5 times in the hospital in order to compensate for the deficiency of red blood cells and hemoglobin. Phototherapy can be recommended for photochemically converting water-insoluble bilirubin into its water-soluble isomer, infusion therapy using colloids to bind and transport indirect bilirubin, as well as solutions
glucose for the energy supply of conjugation. The use of choleretic drugs is also justified in order to prevent bile thickening syndrome and intrahepatic cholestasis.
5. The prognosis is unfavorable, given that there remains a high rate of indirect bilirubin in a child with a severe form of hemolytic disease of the newborn (possibly intrauterine brain damage

5.3.7 Model assignments (assessment tool - Case-task) to assess the development of the competency ПК-3

Case 1 **
A boy, 7 years old.
Complaints of paroxysmal cough, wheezing.
A boy from the first normal pregnancy, an urgent
delivery. Birth weight 3200 g, length 52 cm. The period of
newness without features. On artificial feeding since birth.
When eating raspberries, chocolate, eggs, rashes appear on the skin.
Family history: the child's mother has atopic dermatitis. At the age of 3 and 4, in May, the boy had suffocation attacks outside the city, which
they were treated on their own when moving to the city. The real attack occurred after eating raspberries. The emergency room doctor carried out emergency measures. The attack was stopped. The asset was transferred to the local doctor.
On examination: the condition is of moderate severity. The skin
is pale, blue under the eyes. There is dryness, peeling, and scratching on the cheeks, behind the ears, and in the natural
folds of the arms and legs. The tongue is "
geographical", jams in the corners of the mouth. Breathing is whistling, audible at
a distance. Exhalation is prolonged. BH — 38 in 1 min. Over the lungs percussion
a box—tinged sound, auscultation - a mass of dry wheezing
over the entire surface of the lungs. The boundaries of the heart are within the normal range. The tones are muted. Heart rate 70 beats/min.
The belly is soft, painless. Liver +2 cm from under the edge of the costal arch. The spleen is not palpable. The chair is daily, decorated.
Complete blood count: er. — $4.0x10^{12}$/L, Hb — 117 g/L, Le—
$5.8x10^{9}$/L, e -15%, n/I — 1%, s — 47%, L — 29%, m — 8%, ESR — 3 mm/
an hour.
General urinalysis: relative density — 1016, no mucus, Leucocytes 3-4, Erythrocytes 0.
Chest X-ray: increased pulmonary fields transparency, increased vascular pattern in the root zones, no focal shadows.
Task
1. Make a diagnosis.

2. Urgent measures necessary in this case.
3. Prescribe the treatment needed in the attack-free period.
4. What additional studies will confirm this form of the disease?
5. Which specialists should be shown the child?

The answer to case 1

1. Atopic bronchial asthma, persistent, moderate
to severe, attack period. Gastrointestinal food
allergy. Atopic dermatitis, exacerbation.
2. Inhalation therapy: inhalation of bronchospasmolytics,
corticosteroids, mucolytics, seizure relief with an assessment
of the patient's condition 20 minutes after the
inhalation. If inhalation is ineffective
, infusion therapy (euphyllin, prednisone) is used.
3. Basic therapy is inhaled corticosteroids as
monotherapy or in combination with antileukotrienes
((montelukast, singular, montelar). Elimination diet.
4. During the attack period, spirography is performed, during the inter—
attack period, peak flowmetry.
5. Consultation with a dermatologist, gastroenterologist.

Case 2*

Girl, 11 years old. Complaints of fever in the evening up to 38.5 ° C,
wet cough, general weakness.
She got sick 2 weeks ago, when she had sore throat, mucous discharge
from the nose, and a temperature of 37.5 °C in the evenings for two days.
I didn't go to the doctor, I took paracetamol, septolete, lazolvan, nasal drops. The condition improved, the sore throat disappeared, and moderate general weakness persisted. The deterioration occurred 2 days ago, when the temperature rose to 38.5 °C in the evening.,
weakness increased sharply, a cough appeared with the release of a small amount of yellowish-white sputum, after taking paracetamol, the temperature dropped to 37.5 ° C for a short time.
Objectively: the condition is of moderate severity. Sluggish. Appetite is reduced.
The pharynx is hyperemic. Sore throat. Mucous discharge from the nose. The skin
is pale. Breathing is hard in the lungs. Percussion — blunting
of the pulmonary sound on the right in the scapular region. Auscultation —
weakening of breathing in the scapular area on the right. The heart tones
are rhythmic. The abdomen is soft, painless. Liver, spleen are
not enlarged. The stool is daily, well-formed, and the diuresis is normal.
CBC: er. — 4.5 x 10^{12}/l, Hb — 115 g/L, hematocrit — 0.32, Le- 6.9 x 10^{9}/L, b - 0%, e - 2%, p — 2%, s — 56%, L — 35%, m — 5%, the ESR is 37 mm/h.
General urinalysis: the relative density of urine is 1020, the color is yellow, the reaction is acidic, there is no protein, sugar is not detected, leukocytes are 2-4 in subcutaneous tissue, erythrocytes are 0 in subcutaneous tissue, crystals are not present.
ECG: sinus rhythm, 93 beats per 1 min. Diffuse dystrophic changes in the myocardium.
Chest X-ray: infiltration site in S5 on the right. The sinuses are free.
Task
1. Make and justify the diagnosis.
2. Make a differential diagnosis.
3. Additional examination plan.
4. Principles of treatment.
The answer to case 2

1. Community-acquired pneumonia, right-sided, segmental (S5), moderate form.
The onset of the disease is acute, with pronounced catarrhal symptoms, hyperthermia, pneumonic toxicosis, dry cough with scanty yellowish-white sputum, moderate inflammatory changes in the general blood count, increased ESR.
2 Acute bronchitis
3. Sputum culture, repeated ECG.
4. Antibacterial therapy — beta-lactam antibacterial drugs, inhalation of mucolytics, infusion therapy.

Case 3*

A boy, 3 years old. Complaints of fever up to 38.8 ° C during the day, decreases against the background of taking paracetamol, cough is dry. From anamnesis: 2 weeks ago I had acute respiratory viral infections. They did not go to the doctor, they were treated with home remedies. Cough persists for 2 weeks. On inspection, the temperature is 38.0 °C. Active. The pharynx is hyperemic. Nasal breathing is difficult, mucosal discharge. The cough is unproductive and frequent. The respiratory rate is 42'. The skin is pale. The participation of auxiliary muscles in the act of breathing is noted. Auscultation - hard breathing. Dry wheezing sounds are heard. Percussion is a boxed shade of percussion sound. The heart tones are rhythmic. The belly is soft, painless. The liver and spleen are not enlarged. The stool is daily, well-formed, and the diuresis is normal. General blood test: Er - 4.5 x 1012/L, Hb — 120 g/L, Le - 14.2 x 109/L, e - 9% c - 37%, P - 10%, L - 49%, m - 5%, ESR — 18 mm/h.
Task 1. Make a preliminary diagnosis. 2. Determine the further scope of diagnostic measures. 3. Prescribe treatment according to the suspected pathogen. 4. Determine the scope of rehabilitation measures.
The answer to case 3
1. Acute obstructive bronchitis.
2. Chest X-ray, ELISA for Mycoplasma
pneumoniae, Chlamydia pneumoniae, general IgE, specific IgE antibodies.
3. Antibacterial therapy: macrolides, inhalations of bronchospasmolytics, corticosteroids, mucolytics before bronchospasm relief.
4. Massage, physical therapy, adaptogens. Hypoallergenic lifestyle, diet. Rehabilitation of foci of chronic infection.

Case 4**

A 4-year-old child developed abdominal pain, nausea, and multiple loose stools,
with a temperature of up to 37.5 °C. The child's condition during the examination
is satisfactory, and his well-being does not suffer. The skin is moist,
of normal color, and salivation is sufficient. The tongue has
a whitish coating at the root. The mucous membrane of the oropharynx is moderately
hyperemic. The lymph nodes are not enlarged. Pathology of the lungs and cardiovascular system was not detected. The abdomen is moderately swollen, and rumbles on palpation. The liver is at the edge of the costal arch. The stool was examined by a doctor — liquid, light yellow, with white flakes.
task
1. Make a diagnosis
2. What studies can be recommended in outpatient settings?
3. Prescribe a treatment.
5. What possible complications can be foreseen?
6. Medical examination of the patient after the disease.
The answer to case 4
1. Infectious gastroenteritis, mild severity (probably of viral etiology).
2. Complete blood count, urinalysis. The coprogram. Three-time bacteriological analysis of feces for intestinal group. Stool ELISA for rotavirus antigen or express strip. 3. Take the epid. Please tell the parents the hygiene rules that must be followed when caring for a sick young child. 4. Mechanically and chemically sparing diet,

exclusion of milk ; oral rehydration with hypoosmolar solutions (Humana-electrolyte, gastrolite, hydrolite) 1 liter of boiled water – 1 tsp salt without a slide + 6 tsp sugar without a slide For children under 5 years of age, half as much salt and sugar per the same volume of water. Solder off 2-3 tablespoons every 5 minutes at the rate of: The 1st stage is primary rehydration - replenishment of losses that occurred before seeking medical help, and is calculated for 6 hours. The total amount of liquid is 50-80 ml / kg for 6 hours 2-3 tbsp.l.every 5 minutes. After vomiting, do not give 1 hour The 2nd stage is supportive rehydration, which is the replenishment of current fluid losses during acute respiratory failure. 80-100 ml / kg of liquid is prescribed per day. The duration of the second stage of oral rehydration continues until recovery or indications for parenteral correction of dehydration appear. It should be borne in mind that the correction of dehydration is impossible without the use of salt-free solutions, among which preference should be given to drinking water (not mineral!), it is possible to use pectin-containing decoctions (apple compote without sugar, carrot-rice broth). The ratio of glucose-salt solutions to drinking water should be 1:1 for watery diarrhea, 2:1 for severe vomiting, 1:2 for invasive diarrhea. Smecta or other enterosorbent, enzymes, probiotics 5. Dehydration, development of intestinal dysbiosis, in rare cases intestinal invagination. The prognosis is favorable. 6. Follow-up within one month after clinical recovery: dairy-free, sparing diet, enzymes, probiotics.

Case 5 ***

A girl, 3 months old. She was born on time, on natural feeding.
Mental and physical development correspond to age.
The child's father has had a cough in the last two weeks. According to the mother,
at a normal temperature, the child had a cough, which
worsened in the following days. A week later, the child was
hospitalized according to the severity of the condition with a diagnosis of "acute respiratory viral infections, pneumonia".
Upon admission: the condition is of moderate severity. The girl is pale.
Cough is paroxysmal, accompanied by cyanosis of the face, sometimes
with vomiting, discharge of thick, viscous sputum. It's hard in the lungs
breathing, wired wheezing. Heart tones are loud, tachycardia.
According to the internal organs, there are no special features.
At the end of the second week of the disease, the condition became severe.
His face was puffy, and cyanosis of the nasolabial triangle persisted
constantly. The cough worsened, became paroxysmal to 20-30
once a day with vomiting. Periodically, the child had
respiratory arrest, during which cyanosis appeared,
convulsions were noted several times. Then the temperature rose to 38.5 °C,
moist, bubbly wheezes began to be heard in the lungs, and
constant shortness of breath with retraction of the yielding places of the chest.
Heart tones are muted, heart rate is up to 160 beats/min. The child became
sluggish, restless at times.
Chest X-ray: pulmonary fields of increased
pneumatization, a large number of small focal shadows, especially in the basal and lower regions.
Total blood count: erythrocytes — 3.8 $x10^{12}$/l, hemoglobin —
108 g/l, leukocytes — 18.2 $x10^{9}$/l, color - 0.87, e — 5%, n/I — 5%,
s/I — 19%, L — 61%, m — 10%, The ESR is 11 mm/hour.
Task
1. Make a clinical diagnosis.
2. What is the suspected source of the disease?
3. What laboratory tests are needed to clarify the etiology of the disease?
4. Are there any complications of the disease in the child?
5. Evaluate the results of the peripheral blood test.

6. In which department should the patient be treated?
7. Prescribe a treatment.

The answer to case 5

1. Whooping cough, typical, severe form. Multiple atelectasis.
2. The source of infection is the child's father.
3. PCR and ELISA diagnostics for whooping cough. Bacteriological examination by the method of cough plates.
4. No.
5. A complete blood count is typical for whooping cough.
6. Observation and treatment in the Intensive Care Unit.
7. Medicines: antibiotics (macrolides), inhalation with berodual, lazolvan.
8. Immunization with vaccines DPT, infanrix, pentaxime, tetraxime.

Case 6 ***

A 3-year-old boy became acutely ill. Within a few hours, the body temperature reached 40 ° C, there was difficulty breathing, sore throat. On examination, the child's condition is severe, the child is restless, the voice has not changed, swallowing any food, even saliva, is difficult and painful. Breathing by his open mouth, excessive salivation, inspiratory shortness of breath at rest with retraction of the supraclavicular pits, and increased shortness of breath when trying to put him to bed. The skin is pale. When examining the pharynx bright diffuse hyperemia. The submandibular lymph nodes are enlarged, not soldered, and the skin above them is unchanged. Breathing is hard in the lungs, it is carried out in all departments, there are no wheezes. The respiratory rate is 60 per minute. The heart tones are loud, the rhythm is correct, the heart rate is 160 beats/min.

Task

1. Make a clinical diagnosis.
2. What causes the severity of the disease?
3. What is the algorithm of emergency care?
4. Features of transportation to the hospital.
5. What is the prevention of this disease?

The answer to case 6

1. Epiglottitis, severe form.
2. The syndrome of infectious toxicosis, a violation of the patency of the respiratory tract due to an increase in the epiglottis due to inflammation determine the severity of the condition.
3. It is necessary to avoid or postpone activities that cause anxiety to the child (venipuncture, lying on his back, etc.), which can lead to sudden respiratory arrest!

At the prehospital stage, you should not try to examine the larynx! Give antipyretics. Parenterally administered inhibitor-protected aminopenicillins, cephalosporins of the third generation. Humidified oxygen is supplied. The child should be under the supervision of a doctor who has the skills of tracheotomy, conicotomy and intubation.

4. Transportation in a sitting position.
5. Immunization with Act Hib, Hiberix, Pentaxime, Infanrix-hexa vaccines is the prevention of infection caused by hemophilic bacillus.

Case 7***

The child is 3 months old, sick for the second day: difficulty in nasal breathing, excessive mucous discharge from the nose, rare dry cough, temperature 37.5 °C. From the third day of the illness, the condition worsened, the cough became obsessive, shortness of breath appeared and quickly increased to 80 in 1 minute, the temperature was 37.3 °C. The child's mother

went to an ambulance.
Upon examination of the child by the SMP doctor, the condition was assessed as severe.
The skin, mucous membranes of the lips and oral cavity are cyanotic.
Breathing is noisy, "puffing", shallow, with difficulty
exhalation and participation of auxiliary muscles in the act of breathing,
with inflating of the wings of the nose, retraction of the supraclavicular pits and interstitial
spaces. Well-being suffers to a lesser extent.
The chest is swollen, above the lungs there is a boxy tinge
of percussive sound, the boundaries of cardiac dullness are reduced, the upper
boundaries of the liver and spleen are shifted down by one intercostal space.
During auscultation, breathing is harsh, exhalation is sharply prolonged, and on inhalation
and exhalation, a mass of finely
bubbly and crepitating wheezes is heard from both sides from the front and back. Heart tones are sonorous, frequency
heart rate 172', I-tone accent over the pulmonary
artery. The boundaries of the heart correspond to age. Other organs
and systems during physical examination without special features.
Task
1. Make a preliminary diagnosis.
2. What syndrome causes the severity of the condition?
3. Determine the indications for hospitalization.
4. What additional research methods should be recommended?
5. Prescribe a treatment.
6. What is the prevention of the disease?
The answer to case 7
1. Bronchiolitis, severe form. Respiratory failure 2.
2. Bronchial obstruction syndrome.
3. Hospitalization is indicated due to the severe condition
of the patient and the presence of bronchial obstruction.
4. Pulse oximetry, general blood analysis, chest X-ray.
5. Oxygen therapy through nasal catheters or head
packs, moistening, hydration, superficial nasal
aspiration, spraying of 3% hypertonic solution through a
nebulizer, berodual - 1 drop / kg, in the absence of the effect of
berodual inhalation, stop.
6. Breast-feeding, exclusion of secondhand smoke,
disinfection of hands, palivizumab (according to indications).

Case 8***
A girl, 11 years old, complains of dull, aching abdominal
pain that occurs 30-45 minutes after eating, as well as weakness, fatigue,
and frequent headaches. The above complaints first appeared 6 months
ago, but no examination or treatment was carried out.
A child from the first, normal pregnancy, an urgent delivery. Since the age of 10, he has been observed by a neurologist for vegetative-vascular dystonia. His mother is 40 years old and suffers from duodenal ulcer; his father is 42 years old and has chronic gastroduodenitis.
Examination: The skin is pale, with moderate humidity. The abdomen is not enlarged. With palpation, tension and pain is noted in the right hypochondrium, in the epigastrium. The liver
protrudes 1.5 cm from under the edge of the costal arch, the edge of the liver is soft,
elastic, and painless. Ortner's symptom (+).

From the side of the lungs and heart - without pathology. The stool is daily, decorated, sometimes lightened.
General blood test: er — 4.6x1012/l, Hb — 130 g/l, color - 0.93,
leuc. — 7.0x109/l, e — 2%, n/I — 2%, s/I — 66%, L — 25%, m — 5%, ESR is 7 mm/hour.
General urinalysis: color is light yellow, transparent,
relative density of urine is 1020, protein is not present, sugar is not present,
leuc. — 1-2 v /w, er. — 0-1 v / w, mucus is a little, there are no salts , no bacteria.
Coprogram: brown, pH — 7.3,
muscle fibers — in small amounts— intracellular starch -
a little, iodophilic flora — a small amount, vegetable fiber — a moderate amount,
mucus — a little, white blood cells –1-2 in the body.
Urine amylase 32 units.
Ultrasound of the abdominal organs: liver — smooth contours, parens-
The chemistry is homogeneous, the echogenicity is enhanced, the vascular network is not expanded, the portal vein is not changed. Gallbladder — 85x37 mm
(the norm is 75x30 mm), the walls are not thickened. Holedoch — up to 3.5 mm
(the norm is 4 mm), the walls are not thickened. After a choleretic breakfast, the gallbladder shrank by 10%.
Task
1. Formulate a diagnosis.
2. Name the aggravating factors of the disease.
3. Prescribe treatment for this child.
4. Tactics of patient monitoring after discharge from the hospital.
The answer to case 8
1. Gall bladder dysfunction of the hypotonic-hypokinetic type.
2. Vegetative-vascular dystonia.
3. Treatment. Therapeutic nutrition is to prescribe foods
with moderate choleretic effects: butter and vegetable oil, cream, sour cream, eggs, vegetable dishes from beets, pumpkins, zucchini, cauliflower, carrots; fruits
rich in dietary fiber (dried apricots, strawberries, raspberries, dried rose hips, etc.); black bread, oatmeal, wheat bran.
Medications: prokinetics (motilium) — 2.5 ml per 10 kg of body weight 3 times a day before meals for 10-15 days for 2-3 months; choleretic drugs (optional):
allohol 1 tablet 3-4 times a day with meals; hofitol
1-2 tablets 3 times a day before meals; flamin 1 tablet 3 times a day before meals; cholenzyme 1 tablet 1-3 times a day after meals; physiotherapy: ozokerite and paraffin applications, electrophoresis with magnesia, sorbitol.
4. During the rehabilitation period, decoctions of choleretic herbs for 2 weeks-
whether quarterly (infusion of oregano herb, decoction of corn
kernels, infusion of rose hips, chamomile 1/4—1/2 cup 3 times
a day for 30 minutes before eating). Mineral water: "Essentuki 4", "Smirnovskaya", "Slavyanovskaya" -3 ml/kg in warm form. In most cases, therapy is performed on an outpatient basis. The best option is spa treatment.

Case 9 **
Girl, 5 years old, constipation is noted from the first year of life, during the last year, stool occurs after 4-5 days, mainly after a cleansing enema, self-defecation is rare, difficult, incomplete. For 6 months encoprese is observed.
The child was full-term, the second in the family, artificial feeding from 2.5 months, was observed by a neurologist with a diagnosis of increased neuro-reflex excitability syndrome.
At the age of 3, she suffered an intestinal infection of unknown etiology.
The mother is 38 years old and suffers from constipation. Father is 40 years old, healthy; the brother is 13 years old, healthy.

Examination: weight 16 kg, height 105 cm, pale pink skin, blue under the eyes, swollen abdomen, painful along the colon, sigma dilated, thickened, fecal stones. Liver + 1.5 cm below the edge of the costal arch, slightly positive vesicular symptoms. There are no changes in other organs.
General blood test: er — 4.0x1012/L, Hb — 118 g/L, Le — 6.2 x 109/L, e — 4%, n/I — 3%, s/I — 47%, L — 40%, M — 6%, ESR — 11 mm/hour.
General urinalysis: color — light yellow, relative density of urine — 1018, protein — no, sugar — no, ep.pl. — a small amount, er. — no, mucus — a little.
Coprogram: dark brown color, well—formed; muscle fibers — in small quantities; intracellular and extracellular starch — a lot, iodophilic flora — a significant amount, indigestible vegetable fiber — a little, mucus - a lot, leuc. — 1-2 per day.
Irrigography: the colon is hypotonic, the sigmoid is significantly elongated and dilated. The rectum is wide in diameter, hypotonic, and on examination, a small portion of barium is excreted from the anus. Emptying from the intestine is incomplete, the pattern of the colon mucosa is rearranged, smoothed, and gaustation in the distal the colon is poorly expressed.
Task
1. What kind of pathology can you think about?
2. Encopresis primary or secondary?
3. Treatment plan.
The answer to case 9
1. Dolichosigma. Chronic colitis in the acute stage. Encopresis.
2. Secondary encopresis.
3. Treatment plan: repeated cleansing enemas with salt water (1 tablespoon of table salt per 1 liter of water at room temperature, 200-500 ml of solution should be administered in the enema) until complete emptying of the colon within a few days (before relief of endocopresis). Microclysms "Microlax" allowed from birth, but it is an emergency medicine, not long-term use, has an irritating effect on the intestinal mucosa).
Then treatment with lactulose or macrogol preparations.
Phase 1 – increasing the dose.
The child is given lactulose or macrogol once a day in an increasing dose until mild diarrhea appears (type 5-6 on the Bristol Stool Scale).
Phase 2.
The child takes a laxative for several months in a dose, maintaining a soft stool. During this time, the rectum, which is no longer stretched by dense feces, becomes toned, the child weans off the association defecation = pain, and during this time the child adapts to the defecation regime: every time after breakfast or after dinner.
Phase 3 – gradual dose reduction.
The drinking regime is 1000 ml per day. To introduce dietary fiber into the diet (gray cereals, stewed vegetables, dried apricots, prunes, in-fat). Abdominal massage, physical therapy.

Case 10 ***
A boy, 7 years old, became acutely ill tonight.
The temperature rose to 38 °C, abdominal pain appeared. I had vomiting once, loose stools with mucus. The ambulance took him to the infectious diseases department with suspected dysentery. On examination, the patient's forced position on his right side with his legs pulled up to his stomach, and a pained expression on his face. The skin is pale, the tongue is dry, covered with a thick coating, slight pharyngeal hyperemia. In the lungs, breathing is vesicular, and the heart tones are distinct.

Palpation of the abdomen determines soreness and muscle tension.
abdominal wall, a positive symptom of Shchetkin-Blumberg.
The stool in the emergency room is liquid, with an admixture of mucus.
task
1. Make a preliminary diagnosis.
2. Your medical tactics.
The answer to case 10
1. Acute appendicitis.
2. Immediate admission to the surgical department.

Case 11**
At a preventive appointment, a general practitioner examines a boy at the age of 5 months. There are no complaints. It is known from the medical history that the child is from the third pregnancy, the second birth (1 medical report). The pregnancy took place in the winter and spring period, and in the second trimester the woman suffered from acute respiratory viral infections. Throughout pregnancy, there was a threat of miscarriage, chronic
fetoplacental insufficiency. Childbirth without special features.
Birth weight 3300 g, length 53 cm, Apgar score 6/7 points.
The baby is attached to the breast 12 hours after birth. Discharged
He was discharged from the hospital on the seventh day with a diagnosis of chronic
intrauterine hypoxia. Up to 3 months on natural
feeding, then it was switched to artificial, kefir was used as a milk
mixture. The child is registered with a
neuropathologist with a diagnosis of "perinatal CNS lesion of
posthypoxic origin, hypertension syndrome." From the age of 3 months
, juice and fruit puree have been introduced into the diet. Currently, the child receives kefir from the dairy kitchen.
Objectively: the condition is satisfactory. Actual weight
7000 g, length 63 cm. Neuropsychiatric development: the child is over-
turns only from the back to the stomach. The emotional reaction
and the development of the auditory and visual analyzers correspond
to age. The skin is pale and clear. The subcutaneous fat layer is well developed
and evenly distributed. Peripheral
lymph nodes are not enlarged. The turgor of the soft tissues is flabby. The head
is irregularly shaped: flattening of the occipital region, parietal
tubercles, large fontanel 1.5 x 1.5 cm, the edges are pliable. The chest
is cylindrical in shape, and rib beads are palpated. The shape
of the upper and lower limbs, wrist and ankle
the joints are not changed. Muscular hypotension is noted. Breathing
is puerile. The heart tones are clear, the rhythm is correct,
and the noise is functional. The abdomen is oval in shape, moderately swollen,
and painful on palpation. The liver protrudes 1.0 cm from under the edge of the right costal
arch, elastic. The spleen is not palpable. The stool is homogeneous, without
pathological impurities, 2 times a day. Diuresis is age-appropriate.
Complete blood count: er. - 3.9 x 1012/l, Hb - 125 g/l, MSN 26, Le 8,7 x 109/l, e 2%, N 1%, C 38%, L 55 5, m 4%, ESR — 4 mm/hour.
General urinalysis: relative urine density — 1012,
protein is not, sugar is not, lake. — 0-1 in n/a, er. — 0-1 in n/a, epit.
flat. — 0-1 in n/a.
Coprogram: fatty acid — +, lake. — 0-1 in n/a, epit. — 0-1 in n/a.

Task
1.Make a diagnosis 2. What medical history data led to the development of hypovitaminosis D? 3. Evaluate the data of the child's physical and neuropsychiatric development. 4. Assign the optimal regime and individual nutrition to the child for one day. 5. In what dose should vitamin D be prescribed?

The answer to case11
1. The child should be monitored with a diagnosis of "rickets of the second grade, period of peak, subacute course; perinatal lesion Central nervous system of posthypoxic origin, hypertensive syndrome".
2. The following factors contributed to the development of rickets: pregnancy during the winter-spring season, which was unfavorable for the full-fledged micronutrient supply of the fetus (lack of sufficient sunlight, deficiency of vitamins in nutrition); burdened course of pregnancy in the mother, accompanied by impaired fetal nutrition; early transfer to artificial feeding; feeding from 3- x months with an unadapted fermented milk mixture.
3. Objectively: body length corresponds to age, normal weight for the specified height. In neuropsychiatric development, there is a delay in the formation of general movements: the child should already be trying to turn over from his stomach to his back, there are symptoms of damage to the musculoskeletal system.
4. 5 feedings every 4 hours
6.00 — adapted milk formula 200 ml;
10.0 — gluten-free porridge 150 ml + butter 3 g + milk mixture 50 ml
14.00 — apple sauce 50 g + adapted milk mixture 150 ml;
18.00 — vegetable puree (150 g) + vegetable oil.butter 3 g + milk mixture 50 ml
22.00 —adapted milk formula 200 ml;
It is necessary to cancel kefir and prescribe an adapted milk formula.
5. Vitamin D (Vigantol, AquaD3) — a daily dose of 2500 IU for 45 days.
Monitoring for possible overdose of cholecalciferol should be carried out by the level of calcium in the daily urine (no more than 2 mg / kg per day).

Case 12***
A boy from healthy parents was admitted to the clinic at the age of 1 month and 11 days.
Anamnesis data: Pregnancy 1, proceeded without complications. The birth is urgent, independent. Body weight at birth is 3550 g, body length is 52 cm. He took the breast well, sucked actively. In the 1st month of his life, he gained 700 g in weight.
At the age of 1 month and 7 days, profuse vomiting suddenly appeared, which was repeated daily 3-4 times a day. After 2 days, constipation and decreased urination appeared.
Objective examination data: the condition of the child upon admission to the clinic of moderate severity. Calm, sucking greedily. There is abundant vomiting from the fountain. The weight deficit is 16%. The skin is pale pink, dry. There is a decrease in the subcutaneous fat layer and tissue turgor. In the lungs, breathing is puerile, there is no wheezing. The breathing rate is 40 per minute. The tones of the heart are clear and loud. The heart rate is 140 per minute. The stomach is well-shaped. In the epigastric region, gastric peristalsis in the form of an hourglass is clearly visible. A thickened pylorus the size of a plum stone is palpated. The number of urinations is 7 times a day.
Biochemical blood test: serum protein – 75.2 g/l, blood pH - 7.60, VE - + 8.5 mEq/L, SB -31.2 mEq/L, pCO2 - 31 mmHg.

X-ray of the gastrointestinal tract with barium revealed an enlarged stomach and revealed a barium retention of more than 24 hours.
Task:
1. Make a diagnosis.
2. What are the symptoms characteristic of this disease?
3. Does the child need additional research methods to clarify the diagnosis?
4. Specify the treatment strategy.
5. How and with what to feed such a patient?
The answer to problem 12
1. Congenital pyloric stenosis.
The diagnosis is made on the basis of medical history data.:
- Profuse, repeated vomiting in a fountain at the age of 1 month. 7 days, with simultaneous absence of bowel movements, which may indicate a high intestinal obstruction. Before that, the child ate well, gained 700 g in weight.
Objective inspection data:
- Symptoms of hypotrophy and exsicosis: a 16% body weight deficit, a decrease in the thickness of the subcutaneous fat layer and tissue turgor, dry skin, thirst (sucks greedily).
- Segmental peristalsis of the stomach in the form of an hourglass is visible (a symptom characteristic of pyloric stenosis).
- A thickened pylorus the size of a plum stone is palpated (hypertrophy of the muscular layer of the pylorus).
Laboratory and instrumental research data:
- "Blood clot" syndrome - an increase in protein levels (associated with a decrease in BCC),
- Decompensated metabolic alkalosis (a characteristic change in blood glucose due to a large loss of gastric juice and acid bases with vomiting).
- An increase in the size of the stomach and retention of the barium mixture in the stomach for more than 24 hours (which is typical for pyloric stenosis). A barium retention of more than 8 hours may already indicate a high intestinal obstruction, possibly associated with a malformation of the pyloric part of the stomach.
2. The symptoms are listed in paragraph 1.
3. In this case, the diagnosis is clear and does not require additional examination, however, a child in need of surgical treatment is shown:
- A general blood test with hemosyndrome (platelets, clotting time, bleeding time).
- Biochemical blood test with mandatory determination of urea, electrolytes, protein.
- Chest X-ray (thymomegaly).
- neurosonography (ultrasound examination of the brain through a large fontanel), to exclude pathology associated with birth trauma.
- Electrocardiography.
- Esophagogastroduodenoscopy is possible if no radiopaque examination of the gastrointestinal tract has been performed.
4. Surgical treatment, Fred-Ramstedt pylorotomy with mandatory preoperative preparation (correction of water and electrolyte disorders).
5. Before surgery, fractional feeding with breast milk or an adapted mixture of 20-30 ml every 2 hours, the necessary energy and water needs are provided by infusion therapy, after surgery, feeding begins after 4 hours, 10 ml every 2 hours, daily the amount of milk in feeding is increased by 10 ml. Usually, the amount of nutrition is adjusted to the age norm in 10 days (with an uncomplicated course of the postoperative period).

Case 13**
A 13-year-old girl has been complaining of severe epigastric and pyloroduodenal pain for the last 10 days. The pain is paroxysmal, stabbing, radiating to the back, lower back and right shoulder. The pain occurs 1-2 hours after eating, sometimes hungry and at night, relief comes after eating. In the last 10 days, I have vomited twice without blood, which has brought relief. The chair is regular and decorated.

It is known that the girl does not eat regularly, often dry-boiled, allergic reactions to citrus fruits, chocolate, eggs. Heredity is burdened – my mother and grandmother have peptic ulcer of the duodenum. 2 weeks ago, the child had a conflict at school.
Objective research data on admission.
Examination: height 160 cm, weight 45 kg. The skin is pale and clear. The language is "geographical", overlaid with a grayish-white coating. The heart tones are clear, loud, and the pulse rate is 92 per minute. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 24 per minute. With deep palpation of the abdomen, moderate muscular defiance, pain in the epigastrium and pyloroduodenal region, Desjardins and Mayo-Robson points. The chair is not changed.
Sexual formula: P3, Ma3, Ah3, Me0.
EGDS - the mucous membrane of the esophagus is pink, the cardia is closed. There is cloudy mucus in the stomach; the mucosa of the antrum of the stomach is nesting focally hyperemic, edematous, and flat protrusions on the walls. The mucous membrane of the bulb is edematous, hyperemic, with a 0.6 cm scar on the anterior wall and a 1.0x0.8 cm rounded ulcerative defect with a hyperemic roller on the back, and the bottom is covered with fibrin. A biopsy was taken.
Ultrasound of the abdominal organs: liver and gallbladder without pathology. There is a large amount of contents in the stomach on an empty stomach, its walls are thickened. Pancreas: head 21 mm (norm-18), body 18 mm (norm-15), tail 24 mm (norm-18), its echogenicity is reduced.
Urease test for Hp infection: positive (++).
Task
1. Make a diagnosis.
2. Etiology of the disease.
3. Prescribe treatment for this patient.
4. What aggravating factors can be identified during this disease?
Answers to case 13
1. Peptic ulcer of the duodenal bulb, exacerbation, uncomplicated. Chronic non-atrophic gastritis, Hp-associated.
Anamnesis: burdened heredity, diet disorders, food allergies, psycho-emotional stress.
Pain syndrome: typical localization in the epigastrium and pyloroduodenal region, occurs after eating after 1-2 hours, hunger and night pains; vomiting, which brings relief.
Objectively: moderate muscular defenseness, pain in the epigastric and pyloroduodenal regions;
EGDS data: the presence of a peptic ulcer; inflammation of the gastric mucosa, duodenum, typical of gastroduodenitis and peptic ulcer;
Hp infection test ++.
2. Hp infection, heredity, food allergy, chronic gastroduodenitis, stress
3. Table 1 for 4 weeks (sparing the mucous membrane of the stomach and duodenum 12),
Antihelicobacterial therapy, taking into account the presence of Hp infection. The drugs of choice are amoxicillin, clarithromycin, de-nol, and esomeprazole.
4. Food allergies, diet disorders, stress (conflict at school).

Case 14 ** 2
A 9-year-old girl
She has been ill for 2 months. After suffering from acute respiratory viral infections, the girl began to complain of thirst, increased appetite, weight loss, and frequent urination. 5 days before the hospitalization, the condition deteriorated sharply, abdominal pain, vomiting, drowsiness, and the smell of acetone from the mouth appeared. On the eve of hospitalization, shortness of breath, repeated vomiting with abdominal pain, and constipation appeared.
Anamnesis data: a child from the 2nd, normal pregnancy and normal birth. Body weight at birth is 3500 g, length is 50 cm. She grew and developed satisfactorily. Previous illnesses: acute respiratory viral infections 2

times a year, chickenpox at the age of 6. Vaccinations are made according to age. My maternal grandmother has type 2 diabetes.
Objective examination data. Upon admission, the condition is severe: severe weakness, sleeps, but when contacted, answers monosyllabic questions and immediately falls asleep. The skin is dry, and the turgor of the tissues is reduced. Dyspnea. Harsh breathing during auscultation. Tachycardia, heart sounds are muffled. Blood pressure is 90/50 mmHg. The pillar. The abdomen is painful on palpation. Liver + 1.5 cm from under the costal arch. Urination is frequent, and the vulva is hyperemic.
Examination data: Blood sugar 30 mmol/l, Sugar in urine (300 ml) 5%, acetone ++++, CBS: PH 7.1, VE – (-20).
Task
1. Make a diagnosis.
2. Continue the examination.
3. Prescribe treatment.
4. Substantiate the phase of the disease.
5. Give an assessment of the CBS indicators.
Answers to case 14
1. Type I diabetes mellitus, familial, grade II ketoacidotic coma, vulvitis.
Rationale: thirst, increased appetite, weight loss, frequent urination, dry skin, acetone odor from the mouth, progressive increase in these symptoms, drowsiness, vomiting, inactivity, shortness of breath, abdominal pain, enlarged liver, vulvar hyperemia, blood sugar 30 mmol / l, acetone in urine ++++, Grandmothers have diabetes mellitus, which is typical for type 1 diabetes.
Constipation, repeated vomiting, shortness of breath, abdominal pain, severe weakness, and metabolic decompensated acidosis are characteristic of grade II diabetic ketoacidotic coma.
2. Blood sugar tests every 3-4 hours, glucosuric profile, CBS every 3-4 hours biochemical blood analysis (protein and fractions, urea, cholesterol, lipoproteins, bilirubin, transaminases, electrolytes), ECG.
3. Infusion therapy: 5-10% glucose + saline solution, 4-5% K chloride solution, panangin, heparin, vitamin C.
4. Constipation, repeated vomiting, shortness of breath, abdominal pain, severe weakness, metabolic decompensated acidosis are characteristic of diabetic ketoacidotic coma of the II degree.
5. Decompensated metabolic acidosis (pH – 7.1, VE-(-20).

Task 15 1 2 3
The girl is 12 days old.
Anamnesis data: a child from the 1st, normal pregnancy, from an urgent delivery. Birth weight 3600, length 52 cm. She screamed immediately, was put to her chest after 12 hours, and sucked actively. The parents are young and healthy. Heredity is not burdened.
At birth, attention was drawn to the irregular structure of the external genitalia: the labia majora resembled a scrotum, and the clitoris was hypertrophied. After being discharged from the 8th day of life, the child began vomiting, which has intensified in recent days, the girl began to refuse to feed, noticeably lost weight.
Objective examination data: the condition is severe, sluggish, vomiting continues, tissue turgor is reduced, the skin is dry, pigmentation in the nipple area. The large fontanel is sunken. Breathing is harsh. The heart tones are moderately muted. The abdomen is soft, with slight pain in the epigastric region. The stool is diluted 1 time. Urination is rare.
Survey data: Biochemical blood test: total protein 65 g/l, urea 6.4 mmol/L, cholesterol 4.2 mmol/L, total bilirubin 4 mmol/L, potassium 6.8 mmol/L, sodium 129.0 mmol/L, Ca 2.4 mmol/L, AlT – 20 Units/l.
Task
1.Make a dignosis
2. What indicator confirms the diagnosis?
3. Prescribe treatment.
4. Make a differential diagnosis
5. Prognosis in case of incorrect diagnosis of this disease.

Answers to case 15

Congenital dysfunction of the adrenal cortex, a losing form. The clinic notes an irregular structure of the genitals (labia majora resemble a scrotum, the clitoris is hypertrophied, pigmentation around the nipples). Vomiting, exsicosis are noted, hyperkalemia and hyponatremia were detected in a biochemical blood test.

2. To confirm the diagnosis, it is necessary to determine 17-hydroxyprogesterone in the blood.

3. Glucocorticoids and mineral corticoids are prescribed to correct the hormonal profile.

4. The wasting form of congenital adrenal cortex dysfunction should be differentiated from pyloric stenosis.

5. With late treatment, children tend to remain stunted for life.

Case 16***

The girl is 11 years old

Anamnesis data: a girl from the 2nd normal pregnancy, 2 normal urgent deliveries. Body weight at birth is 3500 g, length is 50 cm. The newborn period was without any special features, it developed normally. School performance was excellent in the 1st grade, then decreased.

Previous illnesses: measles in severe form at the age of 6, acute respiratory viral infections – 3-4 times a year. At the age of 8, she was diagnosed with tuberculosis intoxication and received ftivazid. Since the age of 7, there has been a decrease in appetite and the appearance of constipation. She stopped growing at the age of 8, and the tooth replacement was disrupted.

Objective examination data: height 124 cm, weight 26 kg upon admission to the hospital. The pulse rate is 60 per minute. Blood pressure is 75/35 mmHg. Lethargy, dry skin, and brittle hair are noted. Auscultation – deafness of heart tones, systolic murmur. The liver protrudes from under the edge of the costal arch by 3 cm.

Laboratory research data:

• Cholesterol 18 mmol/l, blood protein 79 g/l

• Radiograph of the hands: bone differentiation corresponds to 6 years.

Task:

1. Make a diagnosis.

2. Outline a further examination plan.

3. Prescribe a treatment.

Answers to case 16

1. Acquired, moderate hypothyroidism. The diagnosis was made on the basis of medical history and clinic data. Acquired hypothyroidism is supported by the age of onset of the disease (from the age of 7), and clinical symptoms such as decreased appetite, constipation, impaired tooth replacement, stunted growth, brittle hair, bradycardia, deafness of heart tones, arterial hypotension up to 75/35 mmHg, and an increase in liver size. Typical clinical symptoms are moderate, indicating moderate severity of the disease.

The examination revealed hypercholesterolemia of up to 18 mmol/l, and a lag in bone age.

2. Ultrasound of the thyroid gland: there may be a decrease in size and signs of autoimmune thyroiditis. Hormonal profile: decreased T4 and T3, TSH changes (increase in primary, decrease in secondary or tertiary hypothyroidism). With a decrease in TSH, exclude pathology of the hypothalamic-pituitary region (X-ray of the skull- Turkish saddle, EEG, CT scan of the brain).

In a general blood test, anemia of an iron and protein deficiency nature can often be detected.

The ECG shows bradycardia, low voltage of the teeth, and blockages.

3. The main one is lifelong hormone replacement therapy.

More often than others, L-thyroxine is used in an individually selected dose, against which all clinical symptoms should disappear and metabolic and hormonal parameters should normalize.

Case 17**

Girl, 10 years old Medical history: a child from 1 pregnancy, during which acute respiratory diseases were repeatedly noted. In childbirth, the umbilical cord is wrapped around the neck. At birth, the body weight is 2500 g, the length is 49 cm. The Apgar score is 8/9 points. Previous illnesses: acute respiratory viral infections, rubella at the age of 4, chickenpox at the age of 6, repeated sore throats from the age of 1.5.

A year ago, the mother noticed that the child had fatigue, weakness, fatigue, increased appetite, weight loss, bilateral exophthalmos. In the last 2 weeks, the condition has worsened: dizziness, fainting, irritability, trembling of the upper extremities, changes in handwriting, sweating.
Objective examination data: Height 142 cm, weight 21.5 kg. Fussiness, mood lability, and sweating are noted. Funnel-shaped chest. Pulsation of the neck vessels is pronounced. Apical thrust in the V intercostal space, reinforced. The boundaries of relative cardiac dullness are: left – along the mid–clavicular line, right - along the right edge of the sternum. The tones of the heart are accentuated. Pulse is 138 per minute, blood pressure is 120/45 mmHg. Liver +1 cm. The thyroid gland deforms the neck, is elastic, homogeneous, and painless. Exophthalmos, Grefe's symptom +, Mobius's symptom +. Tremor of the eyelids, tongue, fingers of outstretched hands. Laboratory research data:
• Complete blood count: erythrocytes 5.4 x 1012/L, Hb126 g/L, leukocytes 7.9 x 109/L, platelets 344 x 109/L, n/I – 2%, s/I – 57%, lymphocytes 24%, eosinophils - 3%, ESR 5 mm/hr. The duration of bleeding is 3!, blood clotting: the beginning is 1!, the end is 3!.
• Urinalysis: clear, light yellow, relative density is 1025, protein is absent, sugar is not present, leukocytes are 1 in the field of vision, erythrocytes are absent.
• Biochemical blood test: total protein 66 g/L, urea 3.6 mmol/L, triglycerides 0.99, cholesterol 2.8 mmol/L, beta – lipoproteins 26, indirect bilirubin 15 mmol/L, seromucoid 0.31, sugar 6.6 mmol/L, thymol test 3.4, K – 3.9 mmol/L, Ca++, 1.12 mmol/L.
• Blood test for hormones: T3 free – 35 (norm 4.25-8.10), T4 free. 80.3 (norm 10 – 25.0), TSH – 0 (norm 0.24 – 3.5).
Task:
1. Make and justify the diagnosis.
2. Evaluate the research.
3. Continue the examination.
4. Prescribe treatment.
Answers case 17
1. Diffuse toxic goiter, grade II, moderate severity.
The thyroid gland is enlarged and deformes the neck, which corresponds to grade II goiter (according to the WHO classification). The gland is elastic and homogeneous on palpation, which is typical for diffuse goiter. The following symptoms of thyrotoxicosis are expressed: fatigue, increased appetite, weight loss, irritability, hand tremor, handwriting changes, sweating, tachycardia up to 138 beats per minute, increased systolic blood pressure, decreased diastolic blood pressure, that is, high pulse blood pressure (120/45), exophthalmos, positive eye symptoms (Grefe, Me6ius), eyelid tremor, the tongue of the fingers of outstretched hands. The above data are expressed moderately, which corresponds to the average severity of the disease.
2. The diagnosis is confirmed by the hormonal profile – increased T3 freedom, T4 freedom, decreased TSH. The ECG revealed tachycardia, sinus arrhythmia, increased activity of the left ventricular myocardium. Metabolic changes in the blood – a decrease in cholesterol and an increase in glucose are characteristic of thyrotoxicosis.
3. Radiograph of the hand – this pathology is characterized by an acceleration of bone age.
4. Thyrostatics (mercazolil, metisol) are the main treatment, before which a general blood test with hemosyndrome is required.
When prescribing these drugs, there may be side effects: leukopenia, thrombocytopenia, neutropenia, which may be a contraindication for prescribing these drugs. It is necessary to monitor these indicators in dynamics. The initial dose of thyrostatics is 0.5-1 mg / kg of body weight in 3 doses. With a decrease in symptoms of thyrotoxicosis, the dose of the drug is reduced to a maintenance dose (5-10 mg / day). Beta–blockers are prescribed to normalize pulse rate and blood pressure. Sedative therapy in the form of valerian preparations is indicated.

Case 18 * 1, 3, 5
The boy is 11 years old

In February, the child's skin began to darken, there was weakness, headache, craving for salt. Over the summer, the darkening of the skin acquired an intensity unusual for a normal reaction to sunlight. Since October of this year, headaches have become more frequent, appetite has decreased, blood pressure drops with a tendency to decrease, and drowsiness have been noted.
He was treated in the neurological department, where cerebroprotective and symptomatic therapy was performed. The condition worsened and the child was transferred to the endocrinology department.
Anamnesis data: a boy from the 1st pregnancy with toxicosis in the first trimester. Delivery on time, independent. Aspiration of green amniotic fluid during childbirth. Birth weight 3600 g, length 54 cm. He screamed after sucking off the mucus. On the 4th day, pneumonia was diagnosed. During the examination and treatment in the neonatal unit, a congenital heart defect (non-closure of the botall duct) was detected, for which the child was operated at the age of 3.
Heredity: brother – CHD (atrial septal defect; paternal grandmother – type II diabetes mellitus, paternal grandfather – CHD (atrial septal defect).
Objective examination data: the condition is serious, conscious. He reacts negatively to the examination. The position is passive. Body temperature 36.10 C. The skin is bronze in color (even on areas of the body that are closed from sunlight), and areas of hyperpigmentation are especially pronounced on the extensor surfaces of both elbow and knee joints, sacrum, birthmarks, and scrotum. The muscular and subcutaneous fat layer is not pronounced enough, the turgor of the tissues is preserved, and the hair is light. The gum mucosa is dirty gray in color. The tongue is covered with a gray coating. Vesicular respiration. Respiratory rate is 92 per minute, blood pressure is 80/40 mmHg. There is no appetite.
Clinical blood test: Hb 123 g/l, erythrocytes - $4.2x10^{12}$/l, MCH 26, platelets - 246000, Le $9.4X10^{9}$/l, p 1%, s 74%, lymph. 16%, mon. 2%, ESR 3 mm/hour.
Urinalysis: yellow, density – 1015, transparent, protein – absent, glucose – absent, ketone bodies – absent, blood reaction – negative, epithelium – absent, leukocytes – 1 in the field of vision, cylinders – absent, bacteria – absent.
Biochemical blood test: total protein 66 g/L, urea 9.0 mmol/L, creatinine 54.0 mmol/L, total cholesterol 2.7 mmol/L, triglycerides 0.78, β-lipoproteins 21, K 6.0 mmol/L, sodium 109 mmol/L, calcium ++ 1.1 mmol/L, AlAT 25, AsAT 31, LDH 300, glucose 3.5 mmol/l.
Blood glucose test: in 900 - 2.8 mmol /L, in 1300 - 4.5 mmol /L.
Hormonal profile: cortisol 87 (norm 150-660).
Task
1. Make and justify the diagnosis.
2. Evaluate the research.
3. Continue the examination.
4. Prescribe treatment.
Answers to case 18
1. Chronic adrenal insufficiency, primary, acquired, decompensation phase.
The following complaints and medical history data support acquired chronic adrenal insufficiency: weakness, headache, salt cravings, darkening of the skin, decreased appetite, weight loss, which lasted about six months. Darkening of the skin indicates the primacy of this pathology.
2. The diagnosis is confirmed by metabolic changes: typically– an increase in K, a decrease in sodium and glucose, and a decrease in cortisol. The lack of treatment caused decompensation of the disease: severe weakness, nausea, decreased blood pressure, darkening of the skin and mucous membranes.
3. Continue the examination: ECG – since electrolyte disturbances are pronounced in this disease (signs of hyperkalemia are noted on the ECG, rhythm disturbances are possible), ultrasound of the adrenal glands – with the primary genesis of the disease, a decrease in their size is sometimes detected, ECG and electrolytes change during treatment.
4. Lifelong hormone replacement therapy. The dose of glucocorticoids (cortef, prednisone) and mineral corticoids (cortinef) is individually selected.

Case 19 *

A 7-year-old girl was admitted to the hospital complaining of pain in the lumbar region and frequent urination.
Medical history data: a child from the first pregnancy, was born on time. The neonatal period was uneventful. She suffered from chickenpox and rubella from childhood infections. He often suffers from acute respiratory viral infections.
The girl is periodically bothered by abdominal pain; her temperature often rises; sometimes painful urination is noted.
Objective examination data: upon admission to the hospital, the condition is of moderate severity. The skin is pale, the temperature is 38 ° C. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 30 per minute. The tones of the heart are clear and loud. The heart rate is 88 per minute. Pasternatsky's symptom is positive on both sides. Urination is frequent and painful.
Survey data:
Total blood count: Hb - 114 g/L, er - 4.5x 1012/L, leuc. - 18.5 x 109/L, n/I - 10%, s - 70%, L - 22%, m - 9%, ESR - 30 mm/hour.
General urinalysis: alkaline reaction, protein 0.06, white blood cells – completely in the field of vision, red blood cells – 0-1 in the field of vision, bacteria - a lot.
Kidney ultrasound: the kidneys are positioned correctly, the size of the left kidney is larger than normal. The cup-pelvis system is expanded on both sides, more on the left. Suspected doubling of the left kidney.
Task
1. Make a diagnosis and justify it.
2. Specify additional research methods to clarify the diagnosis.
3. What is the purpose of cystography?
4. What kind of research should be conducted to prescribe adequate therapy?
Answers to case 19
1. Secondary chronic pyelonephritis on the background of abnormal kidney development, the stage of exacerbation. - Chronic, as there is a history of repeated fever, combined with abdominal pain and painful urination - Secondary, because ultrasound revealed an expansion of the collecting systems of both kidneys and a suspected doubling of the kidney on the left (developmental anomaly) - Pyelonephritis is in the acute stage, because in the anamnesis and upon admission there are phenomena of general infectious toxicosis, a positive symptom of Pasternatsky, pronounced leukocyturia and bacteriuria, an inflammatory reaction of peripheral blood
2. Microbiological examination of urine (microflora typing taking into account sensitivity to antibiotics), Zimnitsky urine analysis (pyelonephritis is characterized by a moderate restriction of the concentration ability of the kidneys), cystography, cystoscopy according to indications, nephroscintigraphy 6 months after the relief of pyelonephritis attack (the presence of foci of renal parenchyma wrinkling in a child with a chronic inflammatory process)
3. According to ultrasound (enlargement of the collecting kidney system), the presence of vesicoureteral reflux cannot be excluded.
4. Determination of the sensitivity of microflora to antibiotics (antibioticogram)

Case 20 *

A 5-year-old girl was admitted to the hospital complaining of swelling.
Anamnesis data: a child from the first normal pregnancy, delivery on time. Birth weight 3300 gr., length 52cm. Physical psychomotor development without special features. Previous illnesses: chickenpox, often has acute respiratory viral infections. Allergic history: atopic dermatitis up to 3 years old.
After suffering from acute respiratory viral infections, the girl developed swelling on her face and rare urination. The district doctor diagnosed Quincke's edema and prescribed suprastin (chloropyramine). Despite the ongoing therapy, the swelling increased, and the girl was hospitalized.
Physical examination: upon admission to the hospital, the condition is severe. The skin is pale. Pronounced swelling of the face, lower leg, feet, anterior abdominal wall, ascites. In the lungs, breathing is vesicular, there is

no wheezing. The number of breaths is 34 per minute. The heart tones are muted. Pulse is 110 beats per minute, blood pressure is 90/60 mmHg. The abdomen is soft and painless. Liver +2.0 cm from under the edge of the costal arch. He rarely urinates. She excreted 180 ml of urine per day.
- In the urine analysis, protein 8.0 0/00, leukocytes 2-3 in the field of vision, red blood cells are absent.
- Complete blood count: Hb - 127 g/L, ER - $3.8x10^{12}$/L, Le 10.2 $x10^{9}$/L, n 1%, s 36%, L 54%, e - 2%, m - 8%, ESR - 50 mm/hour.
Task
1. Make a diagnosis
2. Justify the diagnosis.
3. What biochemical blood parameters are necessary to clarify the diagnosis?
4. Diet for this disease
5. Prescribe a treatment.
Answers to case 20
1-2.Acute glomerulonephritis with nephrotic syndrome (idiopathic nephrotic syndrome).
Preschool age, the onset of the disease after acute respiratory viral infections, severe edematous syndrome, oliguria, massive proteinuria, and accelerated ESR are typical of nephrotic syndrome (morphologically, it is most likely a disease of minimal changes)
3. Total protein and protein fractions (pronounced hypoproteinemia in combination with hypoalbuminemia can be expected), lipidogram (compensatory increase in cholesterol and triglycerides).
Elevated urea, creatinine, and blood electrolytes (hyperkalemia is possible) may indicate the development of acute renal failure.
Coagulogram (tendency to hypercoagulation)
4. Exclusion of salt and meat (contains sodium chloride), protein restriction (with massive proteinuria), fluid intake in accordance with diuresis and the patient's desire.
5. Bed rest for the period of severe edema, then do not limit physical activity (prevention of osteoporosis)
- Diet (see above),
- Short-course antibacterial therapy for the period of severe edema (prevention of bacterial complications-pneumonia, peritonitis with anasarca).
- Immunosuppressive therapy – prednisone 2 mg / kg or 60 mg/ m2 of body surface area for 6 weeks daily, followed by a switch to an alternating regimen of 1-1.5 mg / kg or 40 mg / m2 for 6 weeks, followed by gradual withdrawal with normal urine tests.
- Anticoagulants, antiplatelet agents (heparin, curantil) to prevent microthrombosis in severe hypovolemia
- Diuretics - extremely careful administration of loop diuretics against the background of adequate hydration of the patient (intravenous drip of rheopolyglucine followed by slow administration of lasix 1-5 mg / kg in 150 ml of glucose)
- In the future, proton pump inhibitors (side effects of corticosteroids on the gastrointestinal tract)

Case 21 **
The girl, 11 years old.
Medical history data: from the 2nd pregnancy, delivery in term. The neonatal period was normal. After 1 year, the child periodically had a rash and Quincke's edema after ingestion of eggs, chocolate, oranges. He often suffers from acute respiratory viral infections.
She suffered from follicular tonsillitis 15 days before her hospitalization. She received antibiotic treatment and drank a lot, including orange juice. On the 14th day of the illness, the child developed pain in the ankle joint and a rash on his legs.
Physical examination upon admission: on the shins, thighs, buttocks, symmetrical, more on the extensor surfaces and around the joints, there is an abundant exudative hemorrhagic rash. The ankle joints are swollen. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 20 per minute. The tones of the heart are sonorous. The pulse rate is 80 per minute. Blood pressure is 110/60 mmHg. The abdomen is soft and

painful on palpation around the navel, at the point of the gallbladder. The stool was after the enema, decorated, with a small amount of mucus.
The formula of sexual development: Ma2, P2, A2, Me0.
- Blood test: Hb-126 g/l, er.-4.0x10^{12}/l, Pt -322x10^{9}/l, Le 7.4x10^{9}/l, p-6%, s-64%.eos.-8%, L.-18%.m-4%, ESR-24 mm/hour.
The bleeding time according to Duque is 3 minutes, the clotting time according to Burger: the beginning is 1 minute, the end is 3 minutes.
Task
1. Make a diagnosis.
2. What clinical syndromes are characteristic of this disease?
3. The examination plan.
4. Treatment plan.
5. What factors could contribute to the development of the disease?
Answers to case 21
1. Hemorrhagic vasculitis with skin, joint and abdominal syndrome. The diagnosis is based on anamnesis (food allergy to eggs, chocolate, citrus fruits). This disease developed 2 weeks after suffering a sore throat. In the clinic of this child's disease, typical manifestations on the skin are exudative hemorrhagic rash on the thighs, lower buttocks, soreness and swelling of the ankle joints, cramping abdominal pain typical of abdominal syndrome.
2. a) cutaneous, b) articular, c) abdominal, d) renal
3. a) Blood test + bleeding time and clotting time, b) coagulogram, c) stool for coprology,
d) urinalysis e) biochemical blood analysis (protein and its fractions, urea, creatinine, potassium, sodium)
4. a) Diet 1
b) detoxification therapy, c) heparin therapy, d) desensitizing therapy
e) rehabilitation of foci of infection.
5. a) allergic potential of the body (exudative diathesis, food allergy),
b) frequent acute respiratory viral infections, c) follicular sore throat suffered in 2 weeks.

Task 22 1,3,5**
The girl is 7 years old.
Anamnesis data: a child from the 1st, normal pregnancy. The delivery in term. She grew and developed normally. She had acute respiratory viral infections 3-4 times a year.
A month before admission, she began to complain of abdominal pain, and her appetite worsened. There were periodic short-term temperature increases up to 38-38.5 degrees without signs of inflammation of the upper respiratory tract. I didn't go to the doctor. In the last days before the hospitalization, pain appeared in the right knee joint, and the child was hospitalized.
Physical examination data upon admission: the skin is pale with a grayish tinge. The mucous membranes are pale. Isolated ecchymoses and an uncommon petechial rash on the legs and chest. Posterior cervical, submandibular, tonsillar, axillary and inguinal lymph nodes up to 1x2 cm, multiple, mobile are palpated. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 25 per minute. Tachycardia. Heart tones are muted, systolic murmur is at the top. Blood pressure is 96/50 mmHg. The abdomen is soft, with moderate pain on palpation in the navel area. The liver protrudes from under the edge of the costal arch by 3 cm, the spleen by 2 cm. Urination is free.
- Blood test: hemoglobin -89 g/l, er.-2.5 x1012/l, platelets-15 x 109/l, leukemia- 42.0 x 109/l, blasts-98%, lymph - 2%, ESR-29 mm/hour.
Task
1. Make a diagnosis.
2. Additional examination plan.
3. What kind of research will clarify the form of the disease?
4. Treatment plan.

5. What diseases should be given a differential diagnosis according to the clinical picture?
Answers to case 22
1. Acute leukemia. Justification: a month before admission, appetite worsened, abdominal pain appeared, and the temperature periodically rose to 38-38.5 ° C without signs of an inflammatory process. On examination, there are signs of intoxication (the skin is pale with a grayish tinge, the mucous membranes are also pale). There are petechiae and ecchymoses on the skin; all groups of lymph nodes, liver and spleen are enlarged. Tachycardia, heart murmur. In the blood test, erythrocytes, hemoglobin, platelets, leukocytosis, and blasts are reduced by 98%.
2. Additional examination plan:
- Bone marrow puncture, to confirm the diagnosis and assess normal bone marrow circulation.
- X-ray of the right knee joint. It should be carried out to identify the cause of pain in it (osteoporosis, destruction).
3. Which study will clarify the form of the disease?
- Cytochemical study will differentiate the main variants of acute leukemia (lymphoblastic, myeloblastic, monoblastic, erythromyelosis).
- Immunological. The use of immunodiagnostics of leukemic cells will make it possible to identify T, B, and O subvariants of acute lymphoblastic leukemia, which have clinical features and different sensitivity to therapy.
4. Treatment plan.
- A combination of chemotherapy drugs: 6 mercaptopurine, methotrexate, prednisone, vincristine, cyclophosphamide, rubomycin, L-asparaginase. Chemotherapeutic treatment is carried out in accordance with the data of cellular kinetics, which determines the order and rhythm of their administration.
- Hemotherapy. This is a transfusion of whole blood or its components (erythromass, leukomass, thrombomass) for replacement purposes in connection with the development of anemia, neutropenia, and thrombocytopenia.
- Antibiotic therapy. Antibiotic therapy is used to prevent septic complications, since in this group of patients the body's resistance (phagocytosis, immune response) is suppressed as a result of the tumor process and prolonged cytostatic therapy.
5. What diseases should be given a differential diagnosis?
- Hypoplastic anemia. Common clinical signs: anemia (pallor of the skin and mucous membranes, tachycardia), hemorrhagic syndrome (petechiae, bruises, bleeding).
Differences in the clinical picture: hypoplastic anemia does not have hyperplastic syndrome (enlargement of lymph nodes, liver and spleen, pain in bones and joints is not characteristic). There are no blast cells in blood tests, and the number of bone marrow cells in the bone marrow punctate decreases sharply.
- Thrombocytopenic purpura. Common clinical signs: hemorrhagic syndrome (petechiae, bruises, bleeding).
Differences in the clinical picture: the patient's well-being is satisfactory, there is no intoxication syndrome (grayish skin tone, weakness, lethargy, decreased appetite). There is no enlargement of the lymph nodes, liver, and spleen. There are normal numbers of neutrophils in blood tests, and there are no blast cells. In the bone marrow, only the megakaryocytic germ is changed (either increased or decreased).
- Infectious mononucleosis. Common clinical signs: lymphoproliferative syndrome (enlargement of all groups of lymph nodes, liver, and spleen). Differences in the clinical picture: there is no anemic and hemorrhagic1 syndromes. Blood tests show atypical mononuclears and there are no blast cells.
- Lymphogranulomatosis. Common clinical symptoms: enlarged lymph nodes. Differences in the clinic: with lymphogranulomatosis, there is a limited increase in lymph nodes at the beginning, itchy skin, and sweating. There are no blast cells in the blood. During a lymph node puncture, Berezovsky-Sternberg cells are detected.

Case 23** 1, 2,3,5
A 3-month-old child was admitted to the hospital with complaints of vomiting, frequent loose stools, and refusal to eat.
From the anamnesis of life: a child from 1 normal pregnancy. Delivery on time, physiological. He screamed at once. Birth weight 3300, length 51 cm. The newborn period proceeded smoothly. She has been on artificial feeding since 1 month due to hypogalactyly in her mother. It feeds on an adapted mixture, by the hour – 6 times

a day and sucks 130-140 g. From 2 months it receives juices, before illness – 30.0 ml. A few days ago, they began to give cottage cheese for 5 g.
He gained weight: for the 1st month - 600 g., for the 2nd – 800 g., for the 3rd - 750 g. He holds his head for 2 months, watches his eyes, hums. I haven't been ill until now.
Epidemiological history: there were no acute gastrointestinal diseases in the family. Medical history: became acutely ill, fever increased to 37.5, vomiting appeared, loose stools up to 10 times on the first day of the disease. Upon examination by the district pediatrician: the temperature is normal, the state of health is slightly disturbed. The stool was examined – mushy, with an abundant admixture of mucus and greenery. When the mother was questioned, it turned out that she had made cottage cheese from kefir the day before and for the first time gave the child 20 g. It was recommended to pause feeding for 6 hours and reduce the feeding dose by half, and give the baby a drink of slightly sweetened weak tea. Over the next 2 days, the child's condition continued to deteriorate; he had a temperature of 37.2-37.5, vomiting up to 3-5 times a day, and stool increased up to 20 times. He was re-examined by a doctor and hospitalized.
Clinical examination data: temperature 37.0. The child's condition is very severe, sluggish. The scream is almost soundless, weak. Motor-inactive. The skin is pale, with a “marble” pattern, slightly moist to the touch. The turgor of the tissues is sharply reduced. The skin on the inner thigh gathers into a fold. The large fontanel sinks in. The facial features are pointed. The breathing rate is 40-45 per minute. There were no respiratory abnormalities. The pulse rate is 150 beats per minute, the heart tones are slightly muffled. Sucks sluggishly, reluctantly. It does not suck out more than 30 ml. Vomiting occurs when trying to give more. The tongue is covered with a whitish coating, but moist. The abdomen is swollen, and rumbling is pronounced on palpation. There is a painful reaction to palpation of the abdomen. The liver protrudes from under the edge of the costal arch by 2 cm. The spleen is not palpable. Stools for the first day of stay in the department up to 20 times, liquid with an admixture of mucus and greenery, with a small amount of feces. The anus opens easily when the buttocks are dilated.
Urination up to 5-6 times a day, in small portions.
In the neuropsychiatric status: sluggish, muscle tone is reduced, tendon reflexes are alive. He reacts to the examination with a weak cry.
Blood test: Hb-140 g/l, er. -5.0x1012 , leuc. – 15x109 , Pt. -15%, S.I. -55%, L. – 25%, M. – 5%, ESR – 20 mm/hour.
2. Blood: pH – 7.32, pCO2 – 35, VE – (-) 7.0
3. Biochemical blood test: total protein – 70.0 g/l, sodium – 128 mmol/L, potassium – 4.0 mmol/L.
Task
1. Identify the main clinical syndromes in the clinical picture of the patient's disease.
2. What are the most likely causes of the disease in our patient?
3. What is the main reason for the severity of the patient's condition, and what causes it?
4. Upon admission, the child was weighed, and his body weight turned out to be 5,000 g.
a) what is the degree of exicosis?
b) what is the likely type of dehydration in this patient, indicate typical clinical and laboratory signs?
5. Formulate a detailed diagnosis of our patient's disease at this stage of his examination.
6. Name the main directions of treatment measures for this patient.
7. To restore water-salt metabolism:
a) determine the total amount of fluid per day needed by this child to eliminate dehydration.
b) what components will this estimated amount of fluid consist of for this child on the first day of treatment,
c) list the therapeutic solutions needed for infusion therapy of this patient.
Answers to case 23
1. The child has the following syndromes: - infectious toxicosis, - exsicosis, - regurgitation and vomiting.
2. The most likely cause of the disease is an intestinal infection, however, it must be remembered that consuming kefir in such large quantities can lead to functional dyspepsia. In the future, it is necessary to make a differential diagnosis between them using additional clinical and laboratory data.

3. The main cause of the severity of the condition is associated with the syndrome of regurgitation and vomiting, which is primary, infectious toxicosis, exicosis, metabolic disorders are associated with loss of fluid and electrolytes directly due to dyspeptic disorders.
4.
a) body weight deficiency is defined as follows: the proper body weight at this age is:
3300+600+800+750=5450 G. We know the actual body weight At admission, the child's weight turned out to be 5000 g. This means that in 3 days the child lost 5450-5000 = 450 g 450x100: 5450= 8.26%, which corresponds to grade II exicosis.
b) hypotonic type of exsicosis (lethargy, adynamia, decreased muscle tone, tachycardia, deafness of heart tones, low serum K levels).
5. Intestinal infection of unknown etiology, intestinal toxicosis with grade II exicosis, hypotonic type.
6. Unloading of food: an introductory tea break for 8-12 hours, then an adapted low-lactose mixture (fermented milk) - fractional meals of 20-30 ml every 2 hours 10 times a day. Fractional rehydration with Rehydrone, given the presence of repeated vomiting in very small amounts.
- Etiotropic therapy: parenteral cephalosporins, oral aminoglycosides.
- Pathogenetic therapy: correction of water and electrolyte disorders – rehydration infusion therapy with glucose-saline solutions, polarizing mixture (glucose-insulin-potassium mixture), fight against acidosis.
- The second stage is the use of bacteriophages, probiotics, and enzymes.
7. The total amount of fluid is about 190-200 ml / kg of body weight.
Necessary components:
- Colloidal solutions: plasma, 10% albumin solution, rheopolyglucine,
- Crystalloid solutions: 10% glucose solution, Ringer's solution, saline solution, 4-5% potassium chloride solution, B vitamins.

Case 24 **

The boy is 2 months old.
Medical history data: a child from 4 pregnancies to 2 births. The previous pregnancy ended with a medical abortion. The real pregnancy occurred 6 months after the abortion. Course: toxicosis of the 2nd half (nephropathy with edema and proteinuria, in the 3rd trimester she suffered from influenza with symptoms of infectious toxicosis).
Birth at 40 weeks, spontaneous, early discharge of amniotic fluid (10 hours before the rest period), green, cloudy waters. The duration of labor is 4 hours. The child screamed immediately, was applied to the breast for 3 days, took the breast badly, sucked sluggishly. The Apgar score is 7/8 points. Birth weight 4500, length 54 cm. Physiological weight loss - 250 g, by the time of discharge from the hospital, the weight had not recovered. From the moment of birth, there was at first an abundance of regurgitation, and at the time of hospitalization - after almost every feeding.
The data of an objective examination in the admission department: age 2 months, the child is restless, blushes when screaming, there is a tilting of the head and tension of the large fontanel. After adapting to the examination, he calmed down and reacts with positive emotions. The head is dolichocephalic in shape with an overhanging occiput, the seams are not closed, a large fontanel 2x2 cm, slightly tense. Moderate chin tremor, clonus of the lower extremities, expansion of the tendon reflex zone. Grefe's symptom is determined.
1. A presumptive diagnosis?
2. What diseases should be differentiated from?
3. The optimal examination plan?
4. Treatment program?
The answer to problem 24:
1. The child has a perinatal CNS lesion of hypoxic origin with intracranial hypertension syndromes, increased neuro-reflex excitability, regurgitation syndrome. The diagnosis can be established on the basis of medical history data.:
- This pregnancy occurred a short time after the abortion.

- Burdened pregnancy (nephropathy, infectious diseases with symptoms of toxicosis).
- Early discharge of amniotic fluid, they are green, cloudy (signs of chronic intrauterine hypoxia).
- Rapid delivery (duration 4 hours).
- Low score on the Apgar scale (8/9 is acceptable, 9/10 points are ideal)
- Large fetus (the combination of rapid delivery and large fetus creates the prerequisites for hypoxic-traumatic damage to the central nervous system)

Objective inspection data:

Restlessness, tilting of the head and tension of the large fontanel (a sign of intracranial hypertension), overhanging occiput (a sign of intrauterine hypoxia), chin tremor, clonus of the lower extremities, expansion of tendon reflexes (a sign of increased neuro-reflex excitability), Grefe's symptom (a sign of intracranial hypertension).

2. In all cases of intracranial hypertension, especially with tension of the large fontanel, tilting of the head, symptoms of hyperesthesia, it is necessary to make a differential diagnosis.:

- With meningitis - With intracranial hemorrhage - With neurotoxicosis (especially if there are signs of infection).

3. General blood test (to exclude bacterial infection).

Biochemical blood test (electrolytes, protein).

Neurosonography (ultrasound examination of the brain through a large fontanel).

Fundus examination (changes with severe intracranial hypertension)

Consultation with a neurologist

When symptoms of infectious toxicosis are added, a lumbar puncture (diagnostic and therapeutic measure) is indicated.

4. If it is not meningitis or subarachnoid hemorrhage, then all therapeutic measures are aimed at establishing a balance between the production and outflow of cerebrospinal fluid, therefore they are prescribed:

- Diuretics that selectively reduce the formation and increase the outflow of cerebrospinal fluid (diacarb at an initial dose of 60 mg in the morning according to the scheme -3 days to give, day break). Glycerol.
- Asparkam, panangin (to compensate for the resulting deficiency of K and magnesium).
- Glycine (to improve metabolic processes in the brain
- Sedative drugs: phenobarbital, phenibut (to lower the threshold of sensitivity from external receptors).
- Since the patient has regurgitation syndrome associated with dyskinesia of the gastrointestinal tract due to dysregulation of pyloric muscle tone against the background of increased neuro-reflex excitability, it is necessary to prescribe neuroveget blockers (2% solution of diprazine, or aminazine at a dose of 1 mg / kg body weight, a single dose 2 times a day i / m). After feeding, keep the patient upright for 20-30 minutes to remove air from the stomach (aerophagy), prescribe an antireflux mixture for 2-3 weeks.

Case 25 **

The newborn is 9 days old.

Anamnesis data: born from the 1st, normal pregnancy, in term, with a body weight of 3050 g, 50 cm. The umbilical cord residue disappeared on day 4, and the umbilical wound healed quickly. The child had toxic erythema in the maternity hospital. Discharged from the maternity hospital on the 5th day with a body weight of 2,950 g. He was breastfed. There were small pustules on the skin of the mother's breast.

On the 6th day of the child's life, single pustules the size of a pinhead appeared on his face, filled with yellowish contents. The mother didn't think much of it. The child was not bathed.

Objective examination data: 3 days after discharge from the maternity hospital, the district pediatrician noted the presence of multiple pustules on the child's head, trunk, buttocks, and limbs. There were dried pustules with the formation of crusts on the face. The body temperature did not rise, the breathing in the lungs was clear, purulent, the number of breaths was 44 per minute. The heart tones are clear, pure, and the heart rate is 144’. The abdomen is soft, painless, the liver is + 2 cm, the spleen is not palpable. The breast sucks willingly, stools 3-4 times a day without pathological impurities.

Task:

1. Make a diagnosis.

2. Name the factors contributing to the development of this disease.
3. Which pathogen is most often caused by this disease?
4. Is it possible to bathe a child?
5. Prescribe a treatment.
The answer to problem 25:
1. Vesiculopustulosis. The diagnosis can be made based on medical history data.:
- The presence of small pustules on the skin of the breast (a possible cause of infection).
- The appearance on the 6th day of the child's life of single pustules the size of a pinhead, filled with yellowish contents (typical time of occurrence and localization).
- Objective inspection data:
- Multiple pustules on the head, trunk, buttocks, limbs, dried pustules with crusts.
- There are no symptoms of infectious toxicosis, which is typical for vesiculopustulosis.
2. - Decreased immune response due to low IdM content at birth, imperfect phagocytosis.
- Features of the newborn's skin: thin, vulnerable, the epidermis easily separates from the dermis, participates in the release of toxins from the body, incomplete protective function.
- Colonization by microorganisms of the newborn at birth with the formation of a normal ratio of dominant and subdominant flora (75-90% lactic acid: 25-10 conditionally pathogenic). The violation leads to pathological colonization with a predominance of conditionally pathogenic flora.
- Bacterial infection in the mother (pustules on the mammary gland).
3. Staphylococcus aureus, other cocci, opportunistic flora.
4. You can bathe with the addition of a solution of permanganate K (pale pink color) to the water and using baby soap.
5. Each element of the vesiculopustulosis should be opened with a sterile needle and treated with solutions of aniline dyes (brilliant green solution, gentian violet, Castelani paint, an aqueous solution of methylene blue), antibiotics are prescribed only for abundant rashes with an unfavorable premorbid background

Case 26
Boy 4.5 months old
Medical history data: a twin child from the 2nd pregnancy. The first pregnancy ended in a miscarriage. Delivery at the 30th week of pregnancy. Birth weight 1700 g, length 36 cm. He screamed at once. Artificial feeding. I did not receive complementary foods or juices. He gained weight satisfactorily. He was not ill. In the last 2 weeks, the mother began to notice that the child had become sluggish, drowsy, skin paleness had increased, and appetite had decreased.
Objective examination data: moderate condition. The skin and conjunctiva are pale, and the subcutaneous fat layer is well developed. Breathing is puerile, there is no wheezing. The number of breaths is 48 per minute. The heart tones are moderately muted. The heart rate is 154 per minute. The belly is soft, painless. The liver is palpated from under the edge of the costal arch by 3 cm, the spleen by 1.5 cm. The stool is regular.
Total blood count: er. – 3.2x1012/l, Hb – 70 g/l, color index –0.65, platelets – 250,000, leukocytes 5.6x109/l, C.I.-32, lymphocytes - 64, monocytes - 3, eosinophils.- 1, the ESR is 6 mm/hour.
Questions:
1. Which clinical form of anemia is most likely in this case:
2. What are the main causes of anemia in this child?
3. What indicators of serum iron are most likely in this case?
4. Should this child be prescribed iron supplements?
5. List the diseases that contribute to the development of anemia in infants.
The answer to case 26
1. Late anemia of premature babies. The baby was born at 30 weeks of pregnancy with a body weight of 1700 g and a length of 36 cm. In this case, in the absence of iron prophylaxis, iron deficiency anemia always develops due to insufficient iron deposition during pregnancy.

2. Multiple pregnancies, prematurity, artificial feeding, feeding defects (I did not receive juices and complementary foods).
3. Low serum iron levels.
4. As a result, it is necessary to prescribe iron supplements.
5. Prematurity, rickets, hypotrophy.

Case 27*

The girl was transferred to a children's hospital at the age of 9 days from the maternity hospital.
Medical history data. A child from 2 pregnancies (the 1st pregnancy ended with a medical abortion 7 years ago, the 2nd pregnancy is real). Labor on the 1st, at the 39th week, amniotomy, polyhydramnios, light waters, anhydrous period of 9 hours and 40 minutes.
The condition at birth is severe, the cry is very weak, the Apgar score is 3/5 points. Birth weight 3150 g, length 50 cm, pale yellow skin, swelling of limbs, trunk. In the lungs, breathing is puerile, there is no wheezing, the number of breaths is 50 per minute. The heart tones are muted, the heart rate is 158 per minute. The abdomen is enlarged, the liver is 7 cm below the costal arch along the mid-clavicular line, and the spleen is 6 cm below the rib. The stool is meconial, the urine is light yellow.
The mother has a B(III) Rh(-) blood type, the child has A(II) Rh(+). During pregnancy, the mother had a high titer of antiresus antibodies detected once (one month before delivery).
At birth, the child's total bilirubin is 185 mmol/l, hemoglobin is 40 g/l. At the 20th minute of life, a therapeutic measure was performed, after which the condition improved somewhat due to a decrease in edematous syndrome. However, the jaundice persisted, and in the first four days of life, a total of 5 such therapeutic measures were carried out. From the 7th day of life, jaundice began to decrease, edema decreased by the fifth day of life. On day 7, she had a weight of 2750 g, after that she began to gain weight gradually. The umbilical cord residue disappeared on the 7th day.
Objective examination data upon admission: body temperature 36.5 degrees, weight 2800, head circumference 33.5, chest 31 cm.
The condition is severe, the cry is quiet, there is lanugo on the shoulders and auricles, the umbilical ring is located low. The skin is icteric, dry, cyanosis of the nasolabial triangle, cyanosis of the feet, palms. Umbilical wound with serous discharge, there is swelling of the lower part of the trunk and limbs. The large fontanel is 1x1 cm. In the lungs, breathing is puerile, there is no wheezing. The number of breaths is 44 per minute. Heart tones are loud, systolic murmur is at the top, and the boundaries of relative cardiac dullness are within the age norm. The heart rate is 160 per minute. The abdomen is soft, the liver is +3 cm, the spleen is +1.5 cm. The stool is yellow, the urine is light. Motor activity is reduced, reflexes of newborns are reduced, an unstable symptom of Grefe.
The child is being artificially fed with an adapted 70 ml formula 7 times a day.
Complete blood count: Hb 116 g/l, er. 4.1x1012/l, platelets 143 x 109/l, Le -8.3x109/l, myel.-2, metamyel.-1, P.ya.-2, S.ya.-60, E.-1, L.-26, M.-7. cell size-1, ESR-4 mm/hour.
Blood biochemistry: protein 70 g/l, urea 4.2 mmol/L, cholesterol 3.8 mmol/L, direct - no bilirubin, indirect – 250 mmol/l.
Task:
1. Make a diagnosis.
2. What causes the severity of the child's condition?
3. Schedule a further examination.
4. Which treatment event was held in the hospital 5 times. Other methods of treating this disease?
5. Prognosis.
The answer to case 27
1. Edematous form of hemolytic disease of newborns.
Rationale: incompatibility of the Rh factor in the fetus and pregnant woman, high titers of antiresus antibodies, edema, enlarged liver, low hemoglobin, high indirect bilirubin.

2. The severity of the condition is due to a high level of total bilirubin 185 mmol / l, a low hemoglobin content of 40 g / l, as a result of which hypoxia of the newborn is noted with a low score on the Apgar scale of 3/5 points. Increasing anemia and hypoxia required a 5-fold replacement blood transfusion.
3. Examination plan: monitoring of hemoglobin, erythrocytes, indirect and direct bilirubin levels to monitor the rate of hemolysis and prevent the possibility of bilirubin encephalopathy), determination of the hourly increase in bilirubin, observation by a neurologist.
4. Replacement blood transfusion was performed 5 times in the hospital in order to compensate for the deficiency of red blood cells and hemoglobin. Phototherapy can be recommended for photochemically converting water-insoluble bilirubin into its water-soluble isomer, infusion therapy using colloids to bind and transport indirect bilirubin, as well as solutions
glucose for the energy supply of conjugation. The use of choleretic drugs is also justified in order to prevent bile thickening syndrome and intrahepatic cholestasis.
5. The prognosis is unfavorable, given that there remains a high rate of indirect bilirubin in a child with a severe form of hemolytic disease of the newborn (possibly intrauterine brain damage

Assessment criteria (assessment tool — Case-task)

Grade	Assessment criteria
outstanding	The student has exceeded the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject ("Outstanding")
excellent	The student has met the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject matter. The student has exceptional critical thinking and problem solving skills and has consistently produced high-quality work ("Excellent")
very good	The student has shown a good grasp of the course material, has the necessary skills and has created work of solid quality. The answer was nearly perfect, but there was one small error. (" Very good")
good	The student has generally performed well, but there may still be areas for improvement. The answer was correct, but there were some major errors ("Good")
satisfactory	The student has met the bare minimum of what is expected, but may need to improve in several areas. He has a basic understanding of the subject but likely lack in depth knowledge, critical thinking and analytical skills. The answer was partially correct, there were many major errors ("Satisfactory")
unsatisfactory	The student has demonstrated insufficient understanding of the material, has not kept up with the coursework or has submitted incomplete or careless work ("Unsatisfactory" or "Below Average")
poor	The student has not met the minimum standards of achievement for the course ("Poor" or "Fail").

5.3.8 Model assignments (assessment tool - Case-task) to assess the development of the competency ПК-3

Case 1 **

A boy, 7 years old.

Complaints of paroxysmal cough, wheezing.

A boy from the first normal pregnancy, an urgent delivery. Birth weight 3200 g, length 52 cm. The period of newness without features. On artificial feeding since birth.

When eating raspberries, chocolate, eggs, rashes appear on the skin.

Family history: the child's mother has atopic dermatitis. At the age of 3 and 4, in May, the boy had suffocation attacks outside the city, which they were treated on their own when moving to the city. The real attack occurred after eating raspberries. The emergency room doctor carried out emergency measures. The attack was stopped. The asset was transferred to the local doctor.

On examination: the condition is of moderate severity. The skin is pale, blue under the eyes. There is dryness, peeling, and scratching on the cheeks, behind the ears, and in the natural folds of the arms and legs. The tongue is " geographical", jams in the corners of the mouth. Breathing is whistling, audible at a distance. Exhalation is prolonged. BH — 38 in 1 min. Over the lungs percussion a box—tinged sound, auscultation - a mass of dry wheezing over the entire surface of the lungs. The boundaries of the heart are within the normal range. The tones are muted. Heart rate 70 beats/min.

The belly is soft, painless. Liver +2 cm from under the edge of the costal arch. The spleen is not palpable. The chair is daily, decorated.

Complete blood count: er. — $4.0x10^{12}$/L, Hb — 117 g/L, Le— $5.8x10^{9}$/L, e -15%, n/I — 1%, s — 47%, L — 29%, m — 8%, ESR — 3 mm/ an hour.

General urinalysis: relative density — 1016, no mucus, Leucocytes 3-4, Erythrocytes 0.

Chest X-ray: increased pulmonary fields transparency, increased vascular pattern in the root zones, no focal shadows.

Task

1. Make a diagnosis.
2. Urgent measures necessary in this case.
3. Prescribe the treatment needed in the attack-free period.
4. What additional studies will confirm this form of the disease?
5. Which specialists should be shown the child?

The answer to case 1

1. Atopic bronchial asthma, persistent, moderate to severe, attack period. Gastrointestinal food allergy. Atopic dermatitis, exacerbation.
2. Inhalation therapy: inhalation of bronchospasmolytics, corticosteroids, mucolytics, seizure relief with an assessment of the patient's condition 20 minutes after the inhalation. If inhalation is ineffective , infusion therapy (euphyllin, prednisone) is used.
3. Basic therapy is inhaled corticosteroids as monotherapy or in combination with antileukotrienes ((montelukast, singular, montelar). Elimination diet.
4. During the attack period, spirography is performed, during the inter— attack period, peak flowmetry.
5. Consultation with a dermatologist, gastroenterologist.

Case 2*

Girl, 11 years old. Complaints of fever in the evening up to 38.5 ° C,
wet cough, general weakness.
She got sick 2 weeks ago, when she had sore throat, mucous discharge
from the nose, and a temperature of 37.5 °C in the evenings for two days.
I didn't go to the doctor, I took paracetamol, septolete, lazolvan, nasal drops. The condition improved, the sore throat disappeared, and moderate general weakness persisted. The deterioration occurred 2 days ago, when the temperature rose to 38.5 °C in the evening.,
weakness increased sharply, a cough appeared with the release of a small amount of yellowish-white sputum, after taking paracetamol, the temperature dropped to 37.5 ° C for a short time.
Objectively: the condition is of moderate severity. Sluggish. Appetite is reduced.
The pharynx is hyperemic. Sore throat. Mucous discharge from the nose. The skin
is pale. Breathing is hard in the lungs. Percussion — blunting
of the pulmonary sound on the right in the scapular region. Auscultation —
weakening of breathing in the scapular area on the right. The heart tones
are rhythmic. The abdomen is soft, painless. Liver, spleen are
not enlarged. The stool is daily, well-formed, and the diuresis is normal.
CBC: er. — 4.5 x 10^{12}/l, Hb — 115 g/L, hematocrit — 0.32, Le- 6.9 x 10^{9}/L, b - 0%, e - 2%, p — 2%, s — 56%, L — 35%, m — 5%, the ESR is 37 mm/h.
General urinalysis: the relative density of urine is 1020, the color is yellow, the reaction is acidic, there is no protein, sugar is not detected, leukocytes are 2-4 in subcutaneous tissue, erythrocytes are 0 in subcutaneous tissue, crystals are not present.
ECG: sinus rhythm, 93 beats per 1 min. Diffuse dystrophic changes in the myocardium.
Chest X-ray: infiltration site in S5 on the right. The sinuses are free.
Task
1. Make and justify the diagnosis.
2. Make a differential diagnosis.
3. Additional examination plan.
4. Principles of treatment.
The answer to case 2
1. Community-acquired pneumonia, right-sided, segmental (S5), moderate form.
The onset of the disease is acute, with pronounced catarrhal symptoms, hyperthermia, pneumonic toxicosis, dry cough with scanty yellowish-white sputum, moderate inflammatory changes in the general blood count, increased ESR.
2 Acute bronchitis
3. Sputum culture, repeated ECG.
4. Antibacterial therapy — beta-lactam antibacterial drugs, inhalation of mucolytics, infusion therapy.

Case 3*

A boy, 3 years old. Complaints of fever up to 38.8 ° C during the day, decreases against the background of taking paracetamol, cough is dry. From anamnesis: 2 weeks ago I had acute respiratory viral infections. They did not go to the doctor, they were treated with home remedies. Cough persists for 2 weeks. On inspection, the temperature is 38.0 °C. Active. The pharynx is hyperemic. Nasal breathing is difficult, mucosal discharge. The cough is unproductive and frequent. The respiratory rate is 42’. The skin is pale. The participation of auxiliary muscles in the act of breathing is noted. Auscultation - hard breathing. Dry wheezing sounds are heard. Percussion is a boxed shade of percussion sound. The heart tones are rhythmic. The belly is soft, painless. The liver and spleen are not enlarged. The stool is daily, well-formed, and the diuresis is normal. General blood test: Er - 4.5 x 1012/L, Hb — 120 g/L, Le - 14.2 x 109/L, e - 9% c - 37%, P - 10%, L - 49%, m - 5%, ESR — 18 mm/h.

Task 1. Make a preliminary diagnosis. 2. Determine the further scope of diagnostic measures. 3. Prescribe treatment according to the suspected pathogen. 4. Determine the scope of rehabilitation measures.

The answer to case 3

1. Acute obstructive bronchitis.
2. Chest X-ray, ELISA for Mycoplasma
pneumoniae, Chlamydia pneumoniae, general IgE, specific IgE antibodies.
3. Antibacterial therapy: macrolides, inhalations of bronchospasmolytics, corticosteroids, mucolytics before bronchospasm relief.
4. Massage, physical therapy, adaptogens. Hypoallergenic lifestyle, diet. Rehabilitation of foci of chronic infection.

Case 4**

A 4-year-old child developed abdominal pain, nausea, and multiple loose stools,
with a temperature of up to 37.5 °C. The child's condition during the examination
is satisfactory, and his well-being does not suffer. The skin is moist,
of normal color, and salivation is sufficient. The tongue has
a whitish coating at the root. The mucous membrane of the oropharynx is moderately
hyperemic. The lymph nodes are not enlarged. Pathology of the lungs and cardiovascular system was not detected. The abdomen is moderately swollen, and rumbles on palpation. The liver is at the edge of the costal arch. The stool was examined by a doctor — liquid, light yellow, with white flakes.

task

1. Make a diagnosis
2. What studies can be recommended in outpatient settings?
3. Prescribe a treatment.
5. What possible complications can be foreseen?
6. Medical examination of the patient after the disease.

The answer to case 4

1. Infectious gastroenteritis, mild severity (probably of viral etiology).
2. Complete blood count, urinalysis. The coprogram. Three-time bacteriological analysis of feces for intestinal group. Stool ELISA for rotavirus antigen or express strip. 3. Take the epid. Please tell the parents the hygiene rules that must be followed when caring for a sick young child. 4. Mechanically and chemically sparing diet, exclusion of milk ; oral rehydration with hypoosmolar solutions (Humana-electrolyte, gastrolite, hydrolite) 1 liter of boiled water – 1 tsp salt without a slide + 6 tsp sugar without a slide For children under 5 years of age, half as much salt and sugar per the same volume of water. Solder off 2-3 tablespoons every 5 minutes at the rate of: The 1st stage is primary rehydration - replenishment of losses that occurred before seeking medical help, and is calculated for 6 hours. The total amount of liquid is 50-80 ml / kg for 6 hours 2-3 tbsp.l.every 5 minutes. After vomiting, do not give 1 hour The 2nd stage is supportive rehydration, which is the replenishment of current fluid losses during acute respiratory failure. 80-100 ml / kg of liquid is prescribed per day. The duration of the second stage of oral rehydration continues until recovery or indications for parenteral correction of dehydration appear. It should be borne in mind that the correction of dehydration is impossible without the use of salt-free solutions, among which preference should be given to drinking water (not mineral!), it is possible to use pectin-containing decoctions (apple compote without sugar, carrot-rice broth). The ratio of glucose-salt solutions to drinking water should be 1:1 for watery diarrhea, 2:1 for severe vomiting, 1:2 for invasive diarrhea. Smecta or other enterosorbent, enzymes, probiotics 5. Dehydration, development of intestinal dysbiosis, in rare cases intestinal invagination. The prognosis is favorable. 6. Follow-up within one month after clinical recovery: dairy-free, sparing diet, enzymes, probiotics.

Case 5 ***

A girl, 3 months old. She was born on time, on natural feeding.
Mental and physical development correspond to age.

The child's father has had a cough in the last two weeks. According to the mother, at a normal temperature, the child had a cough, which worsened in the following days. A week later, the child was hospitalized according to the severity of the condition with a diagnosis of "acute respiratory viral infections, pneumonia".
Upon admission: the condition is of moderate severity. The girl is pale. Cough is paroxysmal, accompanied by cyanosis of the face, sometimes with vomiting, discharge of thick, viscous sputum. It's hard in the lungs breathing, wired wheezing. Heart tones are loud, tachycardia.
According to the internal organs, there are no special features.
At the end of the second week of the disease, the condition became severe. His face was puffy, and cyanosis of the nasolabial triangle persisted constantly. The cough worsened, became paroxysmal to 20-30 once a day with vomiting. Periodically, the child had respiratory arrest, during which cyanosis appeared, convulsions were noted several times. Then the temperature rose to 38.5 °C, moist, bubbly wheezes began to be heard in the lungs, and constant shortness of breath with retraction of the yielding places of the chest. Heart tones are muted, heart rate is up to 160 beats/min. The child became sluggish, restless at times.
Chest X-ray: pulmonary fields of increased pneumatization, a large number of small focal shadows, especially in the basal and lower regions.
Total blood count: erythrocytes — 3.8 $x10^{12}$/l, hemoglobin — 108 g/l, leukocytes — 18.2 $x10^{9}$/l, color - 0.87, e — 5%, n/I — 5%, s/I — 19%, L — 61%, m — 10%, The ESR is 11 mm/hour.
Task
1. Make a clinical diagnosis.
2. What is the suspected source of the disease?
3. What laboratory tests are needed to clarify the etiology of the disease?
4. Are there any complications of the disease in the child?
5. Evaluate the results of the peripheral blood test.
6. In which department should the patient be treated?
7. Prescribe a treatment.

The answer to case 5

1. Whooping cough, typical, severe form. Multiple atelectasis.
2. The source of infection is the child's father.
3. PCR and ELISA diagnostics for whooping cough. Bacteriological examination by the method of cough plates.
4. No.
5. A complete blood count is typical for whooping cough.
6. Observation and treatment in the Intensive Care Unit.
7. Medicines: antibiotics (macrolides), inhalation with berodual, lazolvan.
8. Immunization with vaccines DPT, infanrix, pentaxime, tetraxime.

Case 6 ***

A 3-year-old boy became acutely ill. Within a few hours, the body temperature reached 40 ° C, there was difficulty breathing, sore throat. On examination, the child's condition is severe, the child is restless, the voice has not changed, swallowing any food, even saliva, is difficult and painful. Breathing by his open mouth, excessive salivation, inspiratory shortness of breath at rest with retraction of the supraclavicular pits, and increased shortness of breath when trying to put him to bed. The skin is pale. When examining the pharynx

bright diffuse hyperemia. The submandibular lymph nodes are enlarged,
not soldered, and the skin above them is unchanged. Breathing is hard in the lungs,
it is carried out in all departments, there are no wheezes. The respiratory rate is 60 per minute.
The heart tones are loud, the rhythm is correct, the heart rate is 160 beats/min.
Task
1. Make a clinical diagnosis.
2. What causes the severity of the disease?
3. What is the algorithm of emergency care?
4. Features of transportation to the hospital.
5. What is the prevention of this disease?
The answer to case 6
1. Epiglottitis, severe form.
2. The syndrome of infectious toxicosis, a violation of the patency
of the respiratory tract due to an increase in the epiglottis due to inflammation determine the severity of the condition.
3. It is necessary to avoid or postpone activities that cause anxiety to the child (venipuncture, lying on his back, etc.), which can lead to sudden respiratory arrest!
At the prehospital stage, you should not try to examine the larynx! Give antipyretics. Parenterally administered inhibitor-protected aminopenicillins, cephalosporins of the third generation. Humidified oxygen is supplied. The child should be under the supervision of a doctor who has the skills
of tracheotomy, conicotomy and intubation.
4. Transportation in a sitting position.
5. Immunization with Act Hib, Hiberix, Pentaxime, Infanrix-hexa vaccines is the prevention of infection caused by hemophilic bacillus.

Case 7***
The child is 3 months old, sick for the second day: difficulty in nasal
breathing, excessive mucous discharge from the nose, rare dry
cough, temperature 37.5 °C. From the third day of the illness, the condition worsened, the cough became obsessive, shortness of breath appeared and quickly
increased to 80 in 1 minute, the temperature was 37.3 °C. The child's mother
went to an ambulance.
Upon examination of the child by the SMP doctor, the condition was assessed as severe.
The skin, mucous membranes of the lips and oral cavity are cyanotic.
Breathing is noisy, "puffing", shallow, with difficulty
exhalation and participation of auxiliary muscles in the act of breathing,
with inflating of the wings of the nose, retraction of the supraclavicular pits and interstitial
spaces. Well-being suffers to a lesser extent.
The chest is swollen, above the lungs there is a boxy tinge
of percussive sound, the boundaries of cardiac dullness are reduced, the upper
boundaries of the liver and spleen are shifted down by one intercostal space.
During auscultation, breathing is harsh, exhalation is sharply prolonged, and on inhalation
and exhalation, a mass of finely
bubbly and crepitating wheezes is heard from both sides from the front and back. Heart tones are sonorous, frequency
heart rate 172', I-tone accent over the pulmonary
artery. The boundaries of the heart correspond to age. Other organs
and systems during physical examination without special features.
Task
1. Make a preliminary diagnosis.

2. What syndrome causes the severity of the condition?
3. Determine the indications for hospitalization.
4. What additional research methods should be recommended?
5. Prescribe a treatment.
6. What is the prevention of the disease?

The answer to case 7

1. Bronchiolitis, severe form. Respiratory failure 2.
2. Bronchial obstruction syndrome.
3. Hospitalization is indicated due to the severe condition of the patient and the presence of bronchial obstruction.
4. Pulse oximetry, general blood analysis, chest X-ray.
5. Oxygen therapy through nasal catheters or head packs, moistening, hydration, superficial nasal aspiration, spraying of 3% hypertonic solution through a nebulizer, berodual - 1 drop / kg, in the absence of the effect of berodual inhalation, stop.
6. Breast-feeding, exclusion of secondhand smoke, disinfection of hands, palivizumab (according to indications).

Case 8***

A girl, 11 years old, complains of dull, aching abdominal pain that occurs 30-45 minutes after eating, as well as weakness, fatigue, and frequent headaches. The above complaints first appeared 6 months ago, but no examination or treatment was carried out.

A child from the first, normal pregnancy, an urgent delivery. Since the age of 10, he has been observed by a neurologist for vegetative-vascular dystonia. His mother is 40 years old and suffers from duodenal ulcer; his father is 42 years old and has chronic gastroduodenitis.

Examination: The skin is pale, with moderate humidity. The abdomen is not enlarged. With palpation, tension and pain is noted in the right hypochondrium, in the epigastrium. The liver protrudes 1.5 cm from under the edge of the costal arch, the edge of the liver is soft, elastic, and painless. Ortner's symptom (+).

From the side of the lungs and heart - without pathology. The stool is daily, decorated, sometimes lightened.

General blood test: er — 4.6x1012/l, Hb — 130 g/l, color - 0.93, leuc. — 7.0x109/l, e — 2%, n/I — 2%, s/I — 66%, L — 25%, m — 5%, ESR is 7 mm/hour.

General urinalysis: color is light yellow, transparent, relative density of urine is 1020, protein is not present, sugar is not present, leuc. — 1-2 v /w, er. — 0-1 v / w, mucus is a little, there are no salts , no bacteria.

Coprogram: brown, pH — 7.3, muscle fibers — in small amounts— intracellular starch - a little, iodophilic flora — a small amount, vegetable fiber — a moderate amount, mucus — a little, white blood cells –1-2 in the body.

Urine amylase 32 units.

Ultrasound of the abdominal organs: liver — smooth contours, parens-

The chemistry is homogeneous, the echogenicity is enhanced, the vascular network is not expanded, the portal vein is not changed. Gallbladder — 85x37 mm (the norm is 75x30 mm), the walls are not thickened. Holedoch — up to 3.5 mm (the norm is 4 mm), the walls are not thickened. After a choleretic breakfast, the gallbladder shrank by 10%.

Task

1. Formulate a diagnosis.
2. Name the aggravating factors of the disease.

3. Prescribe treatment for this child.
4. Tactics of patient monitoring after discharge from the hospital.
The answer to case 8
1. Gall bladder dysfunction of the hypotonic-hypokinetic type.
2. Vegetative-vascular dystonia.
3. Treatment. Therapeutic nutrition is to prescribe foods
with moderate choleretic effects: butter and vegetable oil, cream, sour cream, eggs, vegetable dishes from beets, pumpkins, zucchini, cauliflower, carrots; fruits
rich in dietary fiber (dried apricots, strawberries, raspberries, dried rose hips, etc.); black bread, oatmeal, wheat bran.
Medications: prokinetics (motilium) — 2.5 ml per 10 kg of body weight 3 times a day before meals for 10-15 days for 2-3 months; choleretic drugs (optional):
allohol 1 tablet 3-4 times a day with meals; hofitol
1-2 tablets 3 times a day before meals; flamin 1 tablet 3 times a day before meals; cholenzyme 1 tablet 1-3 times a day after meals; physiotherapy: ozokerite and paraffin applications, electrophoresis with magnesia, sorbitol.
4. During the rehabilitation period, decoctions of choleretic herbs for 2 weeks-
whether quarterly (infusion of oregano herb, decoction of corn
kernels, infusion of rose hips, chamomile 1/4—1/2 cup 3 times
a day for 30 minutes before eating). Mineral water: "Essentuki 4", "Smirnovskaya", "Slavyanovskaya" -3 ml/kg in warm form. In most cases, therapy is performed on an outpatient basis. The best option is spa treatment.

Case 9 **
Girl, 5 years old, constipation is noted from the first year of life, during the last year, stool occurs after 4-5 days, mainly after a cleansing enema, self-defecation is rare, difficult, incomplete. For 6 months encoprese is observed.
The child was full-term, the second in the family, artificial feeding from 2.5 months, was observed by a neurologist with a diagnosis of increased neuro-reflex excitability syndrome.
At the age of 3, she suffered an intestinal infection of unknown etiology.
The mother is 38 years old and suffers from constipation. Father is 40 years old, healthy; the brother is 13 years old, healthy.
Examination: weight 16 kg, height 105 cm, pale pink skin, blue under the eyes, swollen abdomen, painful along the colon, sigma dilated, thickened, fecal stones. Liver + 1.5 cm below the edge of the costal arch, slightly positive vesicular symptoms. There are no changes in other organs.
General blood test: er — 4.0x1012/L, Hb — 118 g/L, Le — 6.2 x 109/L, e — 4%, n/I — 3%, s/I — 47%, L — 40%, M — 6%, ESR — 11 mm/hour.
General urinalysis: color — light yellow, relative density of urine — 1018, protein — no, sugar — no, ep.pl. — a small amount, er. — no, mucus — a little.
Coprogram: dark brown color, well—formed; muscle fibers — in small quantities; intracellular
and extracellular starch — a lot, iodophilic flora — a significant
amount, indigestible vegetable fiber — a little,
mucus - a lot, leuc. — 1-2 per day.
Irrigography: the colon is hypotonic, the sigmoid is
significantly elongated and dilated. The rectum is wide in diameter,
hypotonic, and on examination, a small portion of barium is excreted
from the anus. Emptying from the intestine is incomplete, the pattern of
the colon mucosa is rearranged, smoothed, and gaustation in the distal
the colon is poorly expressed.
Task
1. What kind of pathology can you think about?
2. Encopresis primary or secondary?

3. Treatment plan.
The answer to case 9
1. Dolichosigma. Chronic colitis in the acute stage. Encopresis.
2. Secondary encopresis.
3. Treatment plan: repeated cleansing enemas with salt water (1 tablespoon of table salt per 1 liter of water at room temperature, 200-500 ml of solution should be administered in the enema) until complete emptying of the colon within a few days (before relief
of endocopresis). Microclysms "Microlax" allowed from birth, but it is an emergency medicine, not long-term use, has an irritating effect on the intestinal mucosa).
Then treatment with lactulose or macrogol preparations.
Phase 1 – increasing the dose.
The child is given lactulose or macrogol once a day in an increasing dose until mild diarrhea appears (type 5-6 on the Bristol Stool Scale).
Phase 2.
The child takes a laxative for several months in a dose, maintaining a soft stool. During this time, the rectum, which is no longer stretched by dense feces, becomes toned, the child weans off the association defecation = pain, and during this time the child adapts to the defecation regime: every time after breakfast or after dinner.
Phase 3 – gradual dose reduction.
The drinking regime is 1000 ml per day. To introduce dietary
fiber into the diet (gray cereals, stewed vegetables, dried apricots, prunes, in-
fat). Abdominal massage, physical therapy.

Case 10 ***
A boy, 7 years old, became acutely ill tonight.
The temperature rose to 38 °C, abdominal pain appeared. I had
vomiting once, loose stools with mucus. The ambulance took
him to the infectious diseases department with suspected dysentery. On examination, the patient's forced position on his right side with his legs pulled up to his stomach, and a pained expression on his face. The skin is pale, the tongue is dry, covered with a thick coating, slight pharyngeal hyperemia. In the lungs, breathing is vesicular, and the heart tones are distinct.
Palpation of the abdomen determines soreness and muscle tension.
abdominal wall, a positive symptom of Shchetkin-Blumberg.
The stool in the emergency room is liquid, with an admixture of mucus.
task
1. Make a preliminary diagnosis.
2. Your medical tactics.
The answer to case 10
1. Acute appendicitis.
2. Immediate admission to the surgical department.

Case 11**
At a preventive appointment, a general practitioner examines a boy at the age of 5 months. There are no complaints. It is known from the medical history that the child is from the third pregnancy, the second birth (1 medical report). The pregnancy took place in the winter and spring period, and in the second trimester the woman suffered from acute respiratory viral infections. Throughout pregnancy, there was a threat of miscarriage, chronic
fetoplacental insufficiency. Childbirth without special features.
Birth weight 3300 g, length 53 cm, Apgar score 6/7 points.
The baby is attached to the breast 12 hours after birth. Discharged
He was discharged from the hospital on the seventh day with a diagnosis of chronic

intrauterine hypoxia. Up to 3 months on natural
feeding, then it was switched to artificial, kefir was used as a milk
mixture. The child is registered with a
neuropathologist with a diagnosis of "perinatal CNS lesion of
posthypoxic origin, hypertension syndrome." From the age of 3 months
, juice and fruit puree have been introduced into the diet. Currently, the child receives kefir from the dairy kitchen.
Objectively: the condition is satisfactory. Actual weight
7000 g, length 63 cm. Neuropsychiatric development: the child is over-
turns only from the back to the stomach. The emotional reaction
and the development of the auditory and visual analyzers correspond
to age. The skin is pale and clear. The subcutaneous fat layer is well developed
and evenly distributed. Peripheral
lymph nodes are not enlarged. The turgor of the soft tissues is flabby. The head
is irregularly shaped: flattening of the occipital region, parietal
tubercles, large fontanel 1.5 x 1.5 cm, the edges are pliable. The chest
is cylindrical in shape, and rib beads are palpated. The shape
of the upper and lower limbs, wrist and ankle
the joints are not changed. Muscular hypotension is noted. Breathing
is puerile. The heart tones are clear, the rhythm is correct,
and the noise is functional. The abdomen is oval in shape, moderately swollen,
and painful on palpation. The liver protrudes 1.0 cm from under the edge of the right costal
arch, elastic. The spleen is not palpable. The stool is homogeneous, without
pathological impurities, 2 times a day. Diuresis is age-appropriate.
Complete blood count: er. - 3.9 x 1012/l, Hb - 125 g/l, MSN 26, Le 8,7 x 109/l, e 2%, N 1%, C 38%, L 55 5, m 4%, ESR — 4 mm/hour.
General urinalysis: relative urine density — 1012,
protein is not, sugar is not, lake. — 0-1 in n/a, er. — 0-1 in n/a, epit.
flat. — 0-1 in n/a.
Coprogram: fatty acid — +, lake. — 0-1 in n/a, epit. — 0-1 in n/a.
Task
1.Make a diagnosis 2. What medical history data led to the development of
hypovitaminosis D? 3. Evaluate the data of the child's physical and neuropsychiatric
development. 4. Assign the optimal regime and individual nutrition to the child for one day.
5. In what dose should vitamin D be prescribed?

The answer to case11
1. The child should be monitored with a diagnosis of "rickets of the second
grade, period of peak, subacute course; perinatal lesion
Central nervous system of posthypoxic origin, hypertensive
syndrome".
2. The following factors contributed to the development of rickets: pregnancy during the
winter-spring season, which was unfavorable for the full-
fledged micronutrient supply of the fetus
(lack of sufficient sunlight, deficiency of vitamins
in nutrition); burdened course of pregnancy in the mother,
accompanied by impaired fetal nutrition; early
transfer to artificial feeding; feeding from 3- x
months with an unadapted fermented milk mixture.

3. Objectively: body length corresponds to age, normal weight for the specified height. In neuropsychiatric development, there is a delay in the formation
of general movements: the child should already be trying to turn over from his stomach to his back, there are symptoms of damage to the musculoskeletal system.
4. 5 feedings every 4 hours
6.00 — adapted milk formula 200 ml;
10.0 — gluten-free porridge 150 ml + butter 3 g + milk mixture 50 ml
14.00 — apple sauce 50 g + adapted milk mixture 150 ml;
18.00 — vegetable puree (150 g) + vegetable oil.butter 3 g + milk mixture 50 ml
22.00 —adapted milk formula 200 ml;
It is necessary to cancel kefir and prescribe an adapted milk formula.
5. Vitamin D (Vigantol, AquaD3) — a daily dose of 2500 IU for 45 days.
Monitoring for possible overdose of cholecalciferol should be carried out by the level of calcium in the daily urine (no more than 2 mg / kg per day).

Case 12***
A boy from healthy parents was admitted to the clinic at the age of 1 month and 11 days.
Anamnesis data: Pregnancy 1, proceeded without complications. The birth is urgent, independent. Body weight at birth is 3550 g, body length is 52 cm. He took the breast well, sucked actively. In the 1st month of his life, he gained 700 g in weight.
At the age of 1 month and 7 days, profuse vomiting suddenly appeared, which was repeated daily 3-4 times a day. After 2 days, constipation and decreased urination appeared.
Objective examination data: the condition of the child upon admission to the clinic of moderate severity. Calm, sucking greedily. There is abundant vomiting from the fountain. The weight deficit is 16%. The skin is pale pink, dry. There is a decrease in the subcutaneous fat layer and tissue turgor. In the lungs, breathing is puerile, there is no wheezing. The breathing rate is 40 per minute. The tones of the heart are clear and loud. The heart rate is 140 per minute. The stomach is well-shaped. In the epigastric region, gastric peristalsis in the form of an hourglass is clearly visible. A thickened pylorus the size of a plum stone is palpated. The number of urinations is 7 times a day.
Biochemical blood test: serum protein – 75.2 g/l, blood pH - 7.60, VE - + 8.5 mEq/L, SB -31.2 mEq/L, pCO2 - 31 mmHg.
X-ray of the gastrointestinal tract with barium revealed an enlarged stomach and revealed a barium retention of more than 24 hours.
Task:
1. Make a diagnosis.
2. What are the symptoms characteristic of this disease?
3. Does the child need additional research methods to clarify the diagnosis?
4. Specify the treatment strategy.
5. How and with what to feed such a patient?
The answer to problem 12
1. Congenital pyloric stenosis.
The diagnosis is made on the basis of medical history data.:
- Profuse, repeated vomiting in a fountain at the age of 1 month. 7 days, with simultaneous absence of bowel movements, which may indicate a high intestinal obstruction. Before that, the child ate well, gained 700 g in weight.
Objective inspection data:
- Symptoms of hypotrophy and exsicosis: a 16% body weight deficit, a decrease in the thickness of the subcutaneous fat layer and tissue turgor, dry skin, thirst (sucks greedily).
- Segmental peristalsis of the stomach in the form of an hourglass is visible (a symptom characteristic of pyloric stenosis).

- A thickened pylorus the size of a plum stone is palpated (hypertrophy of the muscular layer of the pylorus).
Laboratory and instrumental research data:
- "Blood clot" syndrome - an increase in protein levels (associated with a decrease in BCC),
- Decompensated metabolic alkalosis (a characteristic change in blood glucose due to a large loss of gastric juice and acid bases with vomiting).
- An increase in the size of the stomach and retention of the barium mixture in the stomach for more than 24 hours (which is typical for pyloric stenosis). A barium retention of more than 8 hours may already indicate a high intestinal obstruction, possibly associated with a malformation of the pyloric part of the stomach.
2. The symptoms are listed in paragraph 1.
3. In this case, the diagnosis is clear and does not require additional examination, however, a child in need of surgical treatment is shown:
- A general blood test with hemosyndrome (platelets, clotting time, bleeding time).
- Biochemical blood test with mandatory determination of urea, electrolytes, protein.
- Chest X-ray (thymomegaly).
- neurosonography (ultrasound examination of the brain through a large fontanel), to exclude pathology associated with birth trauma.
- Electrocardiography.
- Esophagogastroduodenoscopy is possible if no radiopaque examination of the gastrointestinal tract has been performed.
4. Surgical treatment, Fred-Ramstedt pylorotomy with mandatory preoperative preparation (correction of water and electrolyte disorders).
5. Before surgery, fractional feeding with breast milk or an adapted mixture of 20-30 ml every 2 hours, the necessary energy and water needs are provided by infusion therapy, after surgery, feeding begins after 4 hours, 10 ml every 2 hours, daily the amount of milk in feeding is increased by 10 ml. Usually, the amount of nutrition is adjusted to the age norm in 10 days (with an uncomplicated course of the postoperative period).

Case 13**
A 13-year-old girl has been complaining of severe epigastric and pyloroduodenal pain for the last 10 days. The pain is paroxysmal, stabbing, radiating to the back, lower back and right shoulder. The pain occurs 1-2 hours after eating, sometimes hungry and at night, relief comes after eating. In the last 10 days, I have vomited twice without blood, which has brought relief. The chair is regular and decorated.
It is known that the girl does not eat regularly, often dry-boiled, allergic reactions to citrus fruits, chocolate, eggs. Heredity is burdened – my mother and grandmother have peptic ulcer of the duodenum. 2 weeks ago, the child had a conflict at school.
Objective research data on admission.
Examination: height 160 cm, weight 45 kg. The skin is pale and clear. The language is "geographical", overlaid with a grayish-white coating. The heart tones are clear, loud, and the pulse rate is 92 per minute. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 24 per minute. With deep palpation of the abdomen, moderate muscular defiance, pain in the epigastrium and pyloroduodenal region, Desjardins and Mayo-Robson points. The chair is not changed.
Sexual formula: P3, Ma3, Ah3, Me0.
EGDS - the mucous membrane of the esophagus is pink, the cardia is closed. There is cloudy mucus in the stomach; the mucosa of the antrum of the stomach is nesting focally hyperemic, edematous, and flat protrusions on the walls. The mucous membrane of the bulb is edematous, hyperemic, with a 0.6 cm scar on the anterior wall and a 1.0x0.8 cm rounded ulcerative defect with a hyperemic roller on the back, and the bottom is covered with fibrin. A biopsy was taken.
Ultrasound of the abdominal organs: liver and gallbladder without pathology. There is a large amount of contents in the stomach on an empty stomach, its walls are thickened. Pancreas: head 21 mm (norm-18), body 18 mm (norm-15), tail 24 mm (norm-18), its echogenicity is reduced.
Urease test for Hp infection: positive (++).

Task
1. Make a diagnosis.
2. Etiology of the disease.
3. Prescribe treatment for this patient.
4. What aggravating factors can be identified during this disease?
Answers to case 13
1. Peptic ulcer of the duodenal bulb, exacerbation, uncomplicated. Chronic non-atrophic gastritis, Hp-associated.
Anamnesis: burdened heredity, diet disorders, food allergies, psycho-emotional stress.
Pain syndrome: typical localization in the epigastrium and pyloroduodenal region, occurs after eating after 1-2 hours, hunger and night pains; vomiting, which brings relief.
Objectively: moderate muscular defenseness, pain in the epigastric and pyloroduodenal regions;
EGDS data: the presence of a peptic ulcer; inflammation of the gastric mucosa, duodenum, typical of gastroduodenitis and peptic ulcer;
Hp infection test ++.
2. Hp infection, heredity, food allergy, chronic gastroduodenitis, stress
3. Table 1 for 4 weeks (sparing the mucous membrane of the stomach and duodenum 12),
Antihelicobacterial therapy, taking into account the presence of Hp infection. The drugs of choice are amoxicillin, clarithromycin, de-nol, and esomeprazole.
4. Food allergies, diet disorders, stress (conflict at school).

Case 14 ** 2
A 9-year-old girl
She has been ill for 2 months. After suffering from acute respiratory viral infections, the girl began to complain of thirst, increased appetite, weight loss, and frequent urination. 5 days before the hospitalization, the condition deteriorated sharply, abdominal pain, vomiting, drowsiness, and the smell of acetone from the mouth appeared. On the eve of hospitalization, shortness of breath, repeated vomiting with abdominal pain, and constipation appeared.
Anamnesis data: a child from the 2nd, normal pregnancy and normal birth. Body weight at birth is 3500 g, length is 50 cm. She grew and developed satisfactorily. Previous illnesses: acute respiratory viral infections 2 times a year, chickenpox at the age of 6. Vaccinations are made according to age. My maternal grandmother has type 2 diabetes.
Objective examination data. Upon admission, the condition is severe: severe weakness, sleeps, but when contacted, answers monosyllabic questions and immediately falls asleep. The skin is dry, and the turgor of the tissues is reduced. Dyspnea. Harsh breathing during auscultation. Tachycardia, heart sounds are muffled. Blood pressure is 90/50 mmHg. The pillar. The abdomen is painful on palpation. Liver + 1.5 cm from under the costal arch. Urination is frequent, and the vulva is hyperemic.
Examination data: Blood sugar 30 mmol/l, Sugar in urine (300 ml) 5%, acetone ++++, CBS: PH 7.1, VE – (-20).
Task
1. Make a diagnosis.
2. Continue the examination.
3. Prescribe treatment.
4. Substantiate the phase of the disease.
5. Give an assessment of the CBS indicators.
Answers to case 14
1. Type I diabetes mellitus, familial, grade II ketoacidotic coma, vulvitis.
Rationale: thirst, increased appetite, weight loss, frequent urination, dry skin, acetone odor from the mouth, progressive increase in these symptoms, drowsiness, vomiting, inactivity, shortness of breath, abdominal pain,

enlarged liver, vulvar hyperemia, blood sugar 30 mmol / l, acetone in urine ++++, Grandmothers have diabetes mellitus, which is typical for type 1 diabetes.
Constipation, repeated vomiting, shortness of breath, abdominal pain, severe weakness, and metabolic decompensated acidosis are characteristic of grade II diabetic ketoacidotic coma.
2. Blood sugar tests every 3-4 hours, glucosuric profile, CBS every 3-4 hours biochemical blood analysis (protein and fractions, urea, cholesterol, lipoproteins, bilirubin, transaminases, electrolytes), ECG.
3. Infusion therapy: 5-10% glucose + saline solution, 4-5% K chloride solution, panangin, heparin, vitamin C.
4. Constipation, repeated vomiting, shortness of breath, abdominal pain, severe weakness, metabolic decompensated acidosis are characteristic of diabetic ketoacidotic coma of the II degree.
5. Decompensated metabolic acidosis (pH – 7.1, VE-(-20).

Task 15 1 2 3
The girl is 12 days old.
Anamnesis data: a child from the 1st, normal pregnancy, from an urgent delivery. Birth weight 3600, length 52 cm. She screamed immediately, was put to her chest after 12 hours, and sucked actively. The parents are young and healthy. Heredity is not burdened.
At birth, attention was drawn to the irregular structure of the external genitalia: the labia majora resembled a scrotum, and the clitoris was hypertrophied. After being discharged from the 8th day of life, the child began vomiting, which has intensified in recent days, the girl began to refuse to feed, noticeably lost weight.
Objective examination data: the condition is severe, sluggish, vomiting continues, tissue turgor is reduced, the skin is dry, pigmentation in the nipple area. The large fontanel is sunken. Breathing is harsh. The heart tones are moderately muted. The abdomen is soft, with slight pain in the epigastric region. The stool is diluted 1 time. Urination is rare.
Survey data: Biochemical blood test: total protein 65 g/l, urea 6.4 mmol/L, cholesterol 4.2 mmol/L, total bilirubin 4 mmol/L, potassium 6.8 mmol/L, sodium 129.0 mmol/L, Ca 2.4 mmol/L, AlT – 20 Units/l.
Task
1.Make a dignosis
2. What indicator confirms the diagnosis?
3. Prescribe treatment.
4. Make a differential diagnosis
5. Prognosis in case of incorrect diagnosis of this disease.
Answers to case 15
Congenital dysfunction of the adrenal cortex, a losing form. The clinic notes an irregular structure of the genitals (labia majora resemble a scrotum, the clitoris is hypertrophied, pigmentation around the nipples). Vomiting, exsicosis are noted, hyperkalemia and hyponatremia were detected in a biochemical blood test.
2. To confirm the diagnosis, it is necessary to determine 17-hydroxyprogesterone in the blood.
3. Glucocorticoids and mineral corticoids are prescribed to correct the hormonal profile.
4. The wasting form of congenital adrenal cortex dysfunction should be differentiated from pyloric stenosis.
5. With late treatment, children tend to remain stunted for life.

Case 16***
The girl is 11 years old
Anamnesis data: a girl from the 2nd normal pregnancy, 2 normal urgent deliveries. Body weight at birth is 3500 g, length is 50 cm. The newborn period was without any special features, it developed normally. School performance was excellent in the 1st grade, then decreased.
Previous illnesses: measles in severe form at the age of 6, acute respiratory viral infections – 3-4 times a year. At the age of 8, she was diagnosed with tuberculosis intoxication and received ftivazid. Since the age of 7, there has been a decrease in appetite and the appearance of constipation. She stopped growing at the age of 8, and the tooth replacement was disrupted.

Objective examination data: height 124 cm, weight 26 kg upon admission to the hospital. The pulse rate is 60 per minute. Blood pressure is 75/35 mmHg. Lethargy, dry skin, and brittle hair are noted. Auscultation – deafness of heart tones, systolic murmur. The liver protrudes from under the edge of the costal arch by 3 cm.
Laboratory research data:
• Cholesterol 18 mmol/l, blood protein 79 g/l
• Radiograph of the hands: bone differentiation corresponds to 6 years.
Task:
1. Make a diagnosis.
2. Outline a further examination plan.
3. Prescribe a treatment.
Answers to case 16
1. Acquired, moderate hypothyroidism. The diagnosis was made on the basis of medical history and clinic data. Acquired hypothyroidism is supported by the age of onset of the disease (from the age of 7), and clinical symptoms such as decreased appetite, constipation, impaired tooth replacement, stunted growth, brittle hair, bradycardia, deafness of heart tones, arterial hypotension up to 75/35 mmHg, and an increase in liver size. Typical clinical symptoms are moderate, indicating moderate severity of the disease.
The examination revealed hypercholesterolemia of up to 18 mmol/l, and a lag in bone age.
2. Ultrasound of the thyroid gland: there may be a decrease in size and signs of autoimmune thyroiditis. Hormonal profile: decreased T4 and T3, TSH changes (increase in primary, decrease in secondary or tertiary hypothyroidism). With a decrease in TSH, exclude pathology of the hypothalamic-pituitary region (X-ray of the skull- Turkish saddle, EEG, CT scan of the brain).
In a general blood test, anemia of an iron and protein deficiency nature can often be detected.
The ECG shows bradycardia, low voltage of the teeth, and blockages.
3. The main one is lifelong hormone replacement therapy.
More often than others, L-thyroxine is used in an individually selected dose, against which all clinical symptoms should disappear and metabolic and hormonal parameters should normalize.

Case 17**
Girl, 10 years old Medical history: a child from 1 pregnancy, during which acute respiratory diseases were repeatedly noted. In childbirth, the umbilical cord is wrapped around the neck. At birth, the body weight is 2500 g, the length is 49 cm. The Apgar score is 8/9 points. Previous illnesses: acute respiratory viral infections, rubella at the age of 4, chickenpox at the age of 6, repeated sore throats from the age of 1.5.
A year ago, the mother noticed that the child had fatigue, weakness, fatigue, increased appetite, weight loss, bilateral exophthalmos. In the last 2 weeks, the condition has worsened: dizziness, fainting, irritability, trembling of the upper extremities, changes in handwriting, sweating.
Objective examination data: Height 142 cm, weight 21.5 kg. Fussiness, mood lability, and sweating are noted. Funnel-shaped chest. Pulsation of the neck vessels is pronounced. Apical thrust in the V intercostal space, reinforced. The boundaries of relative cardiac dullness are: left – along the mid–clavicular line, right - along the right edge of the sternum. The tones of the heart are accentuated. Pulse is 138 per minute, blood pressure is 120/45 mmHg. Liver +1 cm. The thyroid gland deforms the neck, is elastic, homogeneous, and painless. Exophthalmos, Grefe's symptom +, Mobius's symptom +. Tremor of the eyelids, tongue, fingers of outstretched hands. Laboratory research data:
• Complete blood count: erythrocytes 5.4 x 1012/L, Hb126 g/L, leukocytes 7.9 x 109/L, platelets 344 x 109/L, n/I – 2%, s/I – 57%, lymphocytes 24%, eosinophils - 3%, ESR 5 mm/hr. The duration of bleeding is 3!, blood clotting: the beginning is 1!, the end is 3!.
• Urinalysis: clear, light yellow, relative density is 1025, protein is absent, sugar is not present, leukocytes are 1 in the field of vision, erythrocytes are absent.
• Biochemical blood test: total protein 66 g/L, urea 3.6 mmol/L, triglycerides 0.99, cholesterol 2.8 mmol/L, beta – lipoproteins 26, indirect bilirubin 15 mmol/L, seromucoid 0.31, sugar 6.6 mmol/L, thymol test 3.4, K – 3.9 mmol/L, Ca++, 1.12 mmol/L.

• Blood test for hormones: T3 free – 35 (norm 4.25-8.10), T4 free. 80.3 (norm 10 – 25.0), TSH – 0 (norm 0.24 – 3.5).
Task:
1. Make and justify the diagnosis.
2. Evaluate the research.
3. Continue the examination.
4. Prescribe treatment.
Answers case 17
1. Diffuse toxic goiter, grade II, moderate severity.
The thyroid gland is enlarged and deformes the neck, which corresponds to grade II goiter (according to the WHO classification). The gland is elastic and homogeneous on palpation, which is typical for diffuse goiter. The following symptoms of thyrotoxicosis are expressed: fatigue, increased appetite, weight loss, irritability, hand tremor, handwriting changes, sweating, tachycardia up to 138 beats per minute, increased systolic blood pressure, decreased diastolic blood pressure, that is, high pulse blood pressure (120/45), exophthalmos, positive eye symptoms (Grefe, Me6ius), eyelid tremor, the tongue of the fingers of outstretched hands. The above data are expressed moderately, which corresponds to the average severity of the disease.
2. The diagnosis is confirmed by the hormonal profile – increased T3 freedom, T4 freedom, decreased TSH. The ECG revealed tachycardia, sinus arrhythmia, increased activity of the left ventricular myocardium. Metabolic changes in the blood – a decrease in cholesterol and an increase in glucose are characteristic of thyrotoxicosis.
3. Radiograph of the hand – this pathology is characterized by an acceleration of bone age.
4. Thyrostatics (mercazolil, metisol) are the main treatment, before which a general blood test with hemosyndrome is required.
When prescribing these drugs, there may be side effects: leukopenia, thrombocytopenia, neutropenia, which may be a contraindication for prescribing these drugs. It is necessary to monitor these indicators in dynamics. The initial dose of thyrostatics is 0.5-1 mg / kg of body weight in 3 doses. With a decrease in symptoms of thyrotoxicosis, the dose of the drug is reduced to a maintenance dose (5-10 mg / day). Beta–blockers are prescribed to normalize pulse rate and blood pressure. Sedative therapy in the form of valerian preparations is indicated.

Case 18 * 1, 3, 5
The boy is 11 years old
In February, the child's skin began to darken, there was weakness, headache, craving for salt. Over the summer, the darkening of the skin acquired an intensity unusual for a normal reaction to sunlight. Since October of this year, headaches have become more frequent, appetite has decreased, blood pressure drops with a tendency to decrease, and drowsiness have been noted.
He was treated in the neurological department, where cerebroprotective and symptomatic therapy was performed. The condition worsened and the child was transferred to the endocrinology department.
Anamnesis data: a boy from the 1st pregnancy with toxicosis in the first trimester. Delivery on time, independent. Aspiration of green amniotic fluid during childbirth. Birth weight 3600 g, length 54 cm. He screamed after sucking off the mucus. On the 4th day, pneumonia was diagnosed. During the examination and treatment in the neonatal unit, a congenital heart defect (non-closure of the botall duct) was detected, for which the child was operated at the age of 3.
Heredity: brother – CHD (atrial septal defect; paternal grandmother – type II diabetes mellitus, paternal grandfather – CHD (atrial septal defect).
Objective examination data: the condition is serious, conscious. He reacts negatively to the examination. The position is passive. Body temperature 36.10 C. The skin is bronze in color (even on areas of the body that are closed from sunlight), and areas of hyperpigmentation are especially pronounced on the extensor surfaces of both elbow and knee joints, sacrum, birthmarks, and scrotum. The muscular and subcutaneous fat layer is not pronounced enough, the turgor of the tissues is preserved, and the hair is light. The gum mucosa is dirty gray in

color. The tongue is covered with a gray coating. Vesicular respiration. Respiratory rate is 92 per minute, blood pressure is 80/40 mmHg. There is no appetite.

Clinical blood test: Hb 123 g/l, erythrocytes - $4.2x10^{12}$/l, MCH 26, platelets - 246000, Le $9.4X10^{9}$/l, p 1%, s 74%, lymph. 16%, mon. 2%, ESR 3 mm/hour.

Urinalysis: yellow, density – 1015, transparent, protein – absent, glucose – absent, ketone bodies – absent, blood reaction – negative, epithelium – absent, leukocytes – 1 in the field of vision, cylinders – absent, bacteria – absent.

Biochemical blood test: total protein 66 g/L, urea 9.0 mmol/L, creatinine 54.0 mmol/L, total cholesterol 2.7 mmol/L, triglycerides 0.78, β-lipoproteins 21, K 6.0 mmol/L, sodium 109 mmol/L, calcium ++ 1.1 mmol/L, AlAT 25, AsAT 31, LDH 300, glucose 3.5 mmol/l.

Blood glucose test: in 900 - 2.8 mmol /L, in 1300 - 4.5 mmol /L.

Hormonal profile: cortisol 87 (norm 150-660).

Task

1. Make and justify the diagnosis.
2. Evaluate the research.
3. Continue the examination.
4. Prescribe treatment.

Answers to case 18

1. Chronic adrenal insufficiency, primary, acquired, decompensation phase.

The following complaints and medical history data support acquired chronic adrenal insufficiency: weakness, headache, salt cravings, darkening of the skin, decreased appetite, weight loss, which lasted about six months. Darkening of the skin indicates the primacy of this pathology.

2. The diagnosis is confirmed by metabolic changes: typically– an increase in K, a decrease in sodium and glucose, and a decrease in cortisol. The lack of treatment caused decompensation of the disease: severe weakness, nausea, decreased blood pressure, darkening of the skin and mucous membranes.

3. Continue the examination: ECG – since electrolyte disturbances are pronounced in this disease (signs of hyperkalemia are noted on the ECG, rhythm disturbances are possible), ultrasound of the adrenal glands – with the primary genesis of the disease, a decrease in their size is sometimes detected, ECG and electrolytes change during treatment.

4. Lifelong hormone replacement therapy. The dose of glucocorticoids (cortef, prednisone) and mineral corticoids (cortinef) is individually selected.

Case 19 *

A 7-year-old girl was admitted to the hospital complaining of pain in the lumbar region and frequent urination.

Medical history data: a child from the first pregnancy, was born on time. The neonatal period was uneventful. She suffered from chickenpox and rubella from childhood infections. He often suffers from acute respiratory viral infections.

The girl is periodically bothered by abdominal pain; her temperature often rises; sometimes painful urination is noted.

Objective examination data: upon admission to the hospital, the condition is of moderate severity. The skin is pale, the temperature is 38 ° C. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 30 per minute. The tones of the heart are clear and loud. The heart rate is 88 per minute. Pasternatsky's symptom is positive on both sides. Urination is frequent and painful.

Survey data:

Total blood count: Hb - 114 g/L, er - 4.5x 1012/L, leuc. - 18.5 x 109/L, n/I - 10%, s - 70%, L - 22%, m - 9%, ESR - 30 mm/hour.

General urinalysis: alkaline reaction, protein 0.06, white blood cells – completely in the field of vision, red blood cells – 0-1 in the field of vision, bacteria - a lot.

Kidney ultrasound: the kidneys are positioned correctly, the size of the left kidney is larger than normal. The cup-pelvis system is expanded on both sides, more on the left. Suspected doubling of the left kidney.

Task
1. Make a diagnosis and justify it.
2. Specify additional research methods to clarify the diagnosis.
3. What is the purpose of cystography?
4. What kind of research should be conducted to prescribe adequate therapy?
Answers to case 19
1. Secondary chronic pyelonephritis on the background of abnormal kidney development, the stage of exacerbation. - Chronic, as there is a history of repeated fever, combined with abdominal pain and painful urination - Secondary, because ultrasound revealed an expansion of the collecting systems of both kidneys and a suspected doubling of the kidney on the left (developmental anomaly) - Pyelonephritis is in the acute stage, because in the anamnesis and upon admission there are phenomena of general infectious toxicosis, a positive symptom of Pasternatsky, pronounced leukocyturia and bacteriuria, an inflammatory reaction of peripheral blood
2. Microbiological examination of urine (microflora typing taking into account sensitivity to antibiotics), Zimnitsky urine analysis (pyelonephritis is characterized by a moderate restriction of the concentration ability of the kidneys), cystography, cystoscopy according to indications, nephroscintigraphy 6 months after the relief of pyelonephritis attack (the presence of foci of renal parenchyma wrinkling in a child with a chronic inflammatory process)
3. According to ultrasound (enlargement of the collecting kidney system), the presence of vesicoureteral reflux cannot be excluded.
4. Determination of the sensitivity of microflora to antibiotics (antibioticogram)

Case 20 *
A 5-year-old girl was admitted to the hospital complaining of swelling.
Anamnesis data: a child from the first normal pregnancy, delivery on time. Birth weight 3300 gr., length 52cm. Physical psychomotor development without special features. Previous illnesses: chickenpox, often has acute respiratory viral infections. Allergic history: atopic dermatitis up to 3 years old.
After suffering from acute respiratory viral infections, the girl developed swelling on her face and rare urination. The district doctor diagnosed Quincke's edema and prescribed suprastin (chloropyramine). Despite the ongoing therapy, the swelling increased, and the girl was hospitalized.
Physical examination: upon admission to the hospital, the condition is severe. The skin is pale. Pronounced swelling of the face, lower leg, feet, anterior abdominal wall, ascites. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 34 per minute. The heart tones are muted. Pulse is 110 beats per minute, blood pressure is 90/60 mmHg. The abdomen is soft and painless. Liver +2.0 cm from under the edge of the costal arch. He rarely urinates. She excreted 180 ml of urine per day.
- In the urine analysis, protein 8.0 0/00, leukocytes 2-3 in the field of vision, red blood cells are absent.
- Complete blood count: Hb - 127 g/L, ER - 3.8x10^{12}/L, Le 10.2 x10^{9}/L, n 1%, s 36%, L 54%, e - 2%, m - 8%, ESR - 50 mm/hour.
Task
1. Make a diagnosis
2. Justify the diagnosis.
3. What biochemical blood parameters are necessary to clarify the diagnosis?
4. Diet for this disease
5. Prescribe a treatment.
Answers to case 20
1-2.Acute glomerulonephritis with nephrotic syndrome (idiopathic nephrotic syndrome).
Preschool age, the onset of the disease after acute respiratory viral infections, severe edematous syndrome, oliguria, massive proteinuria, and accelerated ESR are typical of nephrotic syndrome (morphologically, it is most likely a disease of minimal changes)

3. Total protein and protein fractions (pronounced hypoproteinemia in combination with hypoalbuminemia can be expected), lipidogram (compensatory increase in cholesterol and triglycerides).
Elevated urea, creatinine, and blood electrolytes (hyperkalemia is possible) may indicate the development of acute renal failure.
Coagulogram (tendency to hypercoagulation)
4. Exclusion of salt and meat (contains sodium chloride), protein restriction (with massive proteinuria), fluid intake in accordance with diuresis and the patient's desire.
5. Bed rest for the period of severe edema, then do not limit physical activity (prevention of osteoporosis)
- Diet (see above),
- Short-course antibacterial therapy for the period of severe edema (prevention of bacterial complications-pneumonia, peritonitis with anasarca).
- Immunosuppressive therapy – prednisone 2 mg / kg or 60 mg/ m2 of body surface area for 6 weeks daily, followed by a switch to an alternating regimen of 1-1.5 mg / kg or 40 mg / m2 for 6 weeks, followed by gradual withdrawal with normal urine tests.
- Anticoagulants, antiplatelet agents (heparin, curantil) to prevent microthrombosis in severe hypovolemia
- Diuretics - extremely careful administration of loop diuretics against the background of adequate hydration of the patient (intravenous drip of rheopolyglucine followed by slow administration of lasix 1-5 mg / kg in 150 ml of glucose)
- In the future, proton pump inhibitors (side effects of corticosteroids on the gastrointestinal tract)

Case 21 **
The girl, 11 years old.
Medical history data: from the 2nd pregnancy, delivery in term. The neonatal period was normal. After 1 year, the child periodically had a rash and Quincke's edema after ingestion of eggs, chocolate, oranges. He often suffers from acute respiratory viral infections.
She suffered from follicular tonsillitis 15 days before her hospitalization. She received antibiotic treatment and drank a lot, including orange juice. On the 14th day of the illness, the child developed pain in the ankle joint and a rash on his legs.
Physical examination upon admission: on the shins, thighs, buttocks, symmetrical, more on the extensor surfaces and around the joints, there is an abundant exudative hemorrhagic rash. The ankle joints are swollen. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 20 per minute. The tones of the heart are sonorous. The pulse rate is 80 per minute. Blood pressure is 110/60 mmHg. The abdomen is soft and painful on palpation around the navel, at the point of the gallbladder. The stool was after the enema, decorated, with a small amount of mucus.
The formula of sexual development: Ma2, P2, A2, Me0.
- Blood test: Hb-126 g/l, er.-4.0x10^{12}/l, Pt -322x10^{9}/l, Le 7.4x10^{9}/l, p-6%, s-64%.eos.-8%, L.-18%.m-4%, ESR-24 mm/hour.
The bleeding time according to Duque is 3 minutes, the clotting time according to Burger: the beginning is 1 minute, the end is 3 minutes.
Task
1. Make a diagnosis.
2. What clinical syndromes are characteristic of this disease?
3. The examination plan.
4. Treatment plan.
5. What factors could contribute to the development of the disease?
Answers to case 21
1. Hemorrhagic vasculitis with skin, joint and abdominal syndrome. The diagnosis is based on anamnesis (food allergy to eggs, chocolate, citrus fruits). This disease developed 2 weeks after suffering a sore throat. In the clinic of this child's disease, typical manifestations on the skin are exudative hemorrhagic rash on the thighs,

lower buttocks, soreness and swelling of the ankle joints, cramping abdominal pain typical of abdominal syndrome.
2. a) cutaneous, b) articular, c) abdominal, d) renal
3. a) Blood test + bleeding time and clotting time, b) coagulogram, c) stool for coprology,
d) urinalysis e) biochemical blood analysis (protein and its fractions, urea, creatinine, potassium, sodium)
4. a) Diet 1
b) detoxification therapy, c) heparin therapy, d) desensitizing therapy
e) rehabilitation of foci of infection.
5. a) allergic potential of the body (exudative diathesis, food allergy),
b) frequent acute respiratory viral infections, c) follicular sore throat suffered in 2 weeks.

Task 22 1,3,5**

The girl is 7 years old.
Anamnesis data: a child from the 1st, normal pregnancy. The delivery in term. She grew and developed normally. She had acute respiratory viral infections 3-4 times a year.
A month before admission, she began to complain of abdominal pain, and her appetite worsened. There were periodic short-term temperature increases up to 38-38.5 degrees without signs of inflammation of the upper respiratory tract. I didn't go to the doctor. In the last days before the hospitalization, pain appeared in the right knee joint, and the child was hospitalized.
Physical examination data upon admission: the skin is pale with a grayish tinge. The mucous membranes are pale. Isolated ecchymoses and an uncommon petechial rash on the legs and chest. Posterior cervical, submandibular, tonsillar, axillary and inguinal lymph nodes up to 1x2 cm, multiple, mobile are palpated. In the lungs, breathing is vesicular, there is no wheezing. The number of breaths is 25 per minute. Tachycardia. Heart tones are muted, systolic murmur is at the top. Blood pressure is 96/50 mmHg. The abdomen is soft, with moderate pain on palpation in the navel area. The liver protrudes from under the edge of the costal arch by 3 cm, the spleen by 2 cm. Urination is free.
- Blood test: hemoglobin -89 g/l, er.-2.5 x1012/l, platelets-15 x 109/l, leukemia- 42.0 x 109/l, blasts-98%, lymph - 2%, ESR-29 mm/hour.
Task
1. Make a diagnosis.
2. Additional examination plan.
3. What kind of research will clarify the form of the disease?
4. Treatment plan.
5. What diseases should be given a differential diagnosis according to the clinical picture?
Answers to case 22
1. Acute leukemia. Justification: a month before admission, appetite worsened, abdominal pain appeared, and the temperature periodically rose to 38-38.5 ° C without signs of an inflammatory process. On examination, there are signs of intoxication (the skin is pale with a grayish tinge, the mucous membranes are also pale). There are petechiae and ecchymoses on the skin; all groups of lymph nodes, liver and spleen are enlarged. Tachycardia, heart murmur. In the blood test, erythrocytes, hemoglobin, platelets, leukocytosis, and blasts are reduced by 98%.
2. Additional examination plan:
- Bone marrow puncture, to confirm the diagnosis and assess normal bone marrow circulation.
- X-ray of the right knee joint. It should be carried out to identify the cause of pain in it (osteoporosis, destruction).
3. Which study will clarify the form of the disease?
- Cytochemical study will differentiate the main variants of acute leukemia (lymphoblastic, myeloblastic, monoblastic, erythromyelosis).
- Immunological. The use of immunodiagnostics of leukemic cells will make it possible to identify T, B, and O subvariants of acute lymphoblastic leukemia, which have clinical features and different sensitivity to therapy.

4. Treatment plan.
- A combination of chemotherapy drugs: 6 mercaptopurine, methotrexate, prednisone, vincristine, cyclophosphamide, rubomycin, L-asparaginase. Chemotherapeutic treatment is carried out in accordance with the data of cellular kinetics, which determines the order and rhythm of their administration.
- Hemotherapy. This is a transfusion of whole blood or its components (erythromass, leukomass, thrombomass) for replacement purposes in connection with the development of anemia, neutropenia, and thrombocytopenia.
- Antibiotic therapy. Antibiotic therapy is used to prevent septic complications, since in this group of patients the body's resistance (phagocytosis, immune response) is suppressed as a result of the tumor process and prolonged cytostatic therapy.
5. What diseases should be given a differential diagnosis?
- Hypoplastic anemia. Common clinical signs: anemia (pallor of the skin and mucous membranes, tachycardia), hemorrhagic syndrome (petechiae, bruises, bleeding).
Differences in the clinical picture: hypoplastic anemia does not have hyperplastic syndrome (enlargement of lymph nodes, liver and spleen, pain in bones and joints is not characteristic). There are no blast cells in blood tests, and the number of bone marrow cells in the bone marrow punctate decreases sharply.
- Thrombocytopenic purpura. Common clinical signs: hemorrhagic syndrome (petechiae, bruises, bleeding).
Differences in the clinical picture: the patient's well-being is satisfactory, there is no intoxication syndrome (grayish skin tone, weakness, lethargy, decreased appetite). There is no enlargement of the lymph nodes, liver, and spleen. There are normal numbers of neutrophils in blood tests, and there are no blast cells. In the bone marrow, only the megakaryocytic germ is changed (either increased or decreased).
- Infectious mononucleosis. Common clinical signs: lymphoproliferative syndrome (enlargement of all groups of lymph nodes, liver, and spleen). Differences in the clinical picture: there is no anemic and hemorrhagic1 syndromes. Blood tests show atypical mononuclears and there are no blast cells.
- Lymphogranulomatosis. Common clinical symptoms: enlarged lymph nodes. Differences in the clinic: with lymphogranulomatosis, there is a limited increase in lymph nodes at the beginning, itchy skin, and sweating. There are no blast cells in the blood. During a lymph node puncture, Berezovsky-Sternberg cells are detected.

Case 23** 1, 2,3,5
A 3-month-old child was admitted to the hospital with complaints of vomiting, frequent loose stools, and refusal to eat.
From the anamnesis of life: a child from 1 normal pregnancy. Delivery on time, physiological. He screamed at once. Birth weight 3300, length 51 cm. The newborn period proceeded smoothly. She has been on artificial feeding since 1 month due to hypogalactyly in her mother. It feeds on an adapted mixture, by the hour – 6 times a day and sucks 130-140 g. From 2 months it receives juices, before illness – 30.0 ml. A few days ago, they began to give cottage cheese for 5 g.
He gained weight: for the 1st month - 600 g., for the 2nd – 800 g., for the 3rd - 750 g. He holds his head for 2 months, watches his eyes, hums. I haven't been ill until now.
Epidemiological history: there were no acute gastrointestinal diseases in the family. Medical history: became acutely ill, fever increased to 37.5, vomiting appeared, loose stools up to 10 times on the first day of the disease. Upon examination by the district pediatrician: the temperature is normal, the state of health is slightly disturbed. The stool was examined – mushy, with an abundant admixture of mucus and greenery. When the mother was questioned, it turned out that she had made cottage cheese from kefir the day before and for the first time gave the child 20 g. It was recommended to pause feeding for 6 hours and reduce the feeding dose by half, and give the baby a drink of slightly sweetened weak tea. Over the next 2 days, the child's condition continued to deteriorate; he had a temperature of 37.2-37.5, vomiting up to 3-5 times a day, and stool increased up to 20 times. He was re-examined by a doctor and hospitalized.
Clinical examination data: temperature 37.0. The child's condition is very severe, sluggish. The scream is almost soundless, weak. Motor-inactive. The skin is pale, with a “marble” pattern, slightly moist to the touch. The turgor of the tissues is sharply reduced. The skin on the inner thigh gathers into a fold. The large fontanel sinks in. The facial features are pointed. The breathing rate is 40-45 per minute. There were no respiratory

abnormalities. The pulse rate is 150 beats per minute, the heart tones are slightly muffled. Sucks sluggishly, reluctantly. It does not suck out more than 30 ml. Vomiting occurs when trying to give more. The tongue is covered with a whitish coating, but moist. The abdomen is swollen, and rumbling is pronounced on palpation. There is a painful reaction to palpation of the abdomen. The liver protrudes from under the edge of the costal arch by 2 cm. The spleen is not palpable. Stools for the first day of stay in the department up to 20 times, liquid with an admixture of mucus and greenery, with a small amount of feces. The anus opens easily when the buttocks are dilated.

Urination up to 5-6 times a day, in small portions.

In the neuropsychiatric status: sluggish, muscle tone is reduced, tendon reflexes are alive. He reacts to the examination with a weak cry.

Blood test: Hb-140 g/l, er. -5.0x1012 , leuc. – 15x109 , Pt. -15%, S.I. -55%, L. – 25%, M. – 5%, ESR – 20 mm/hour.

2. Blood: pH – 7.32, pCO2 – 35, VE – (-) 7.0

3. Biochemical blood test: total protein – 70.0 g/l, sodium – 128 mmol/L, potassium – 4.0 mmol/L.

Task

1. Identify the main clinical syndromes in the clinical picture of the patient's disease.

2. What are the most likely causes of the disease in our patient?

3. What is the main reason for the severity of the patient's condition, and what causes it?

4. Upon admission, the child was weighed, and his body weight turned out to be 5,000 g.

a) what is the degree of exicosis?

b) what is the likely type of dehydration in this patient, indicate typical clinical and laboratory signs?

5. Formulate a detailed diagnosis of our patient's disease at this stage of his examination.

6. Name the main directions of treatment measures for this patient.

7. To restore water-salt metabolism:

a) determine the total amount of fluid per day needed by this child to eliminate dehydration.

b) what components will this estimated amount of fluid consist of for this child on the first day of treatment,

c) list the therapeutic solutions needed for infusion therapy of this patient.

Answers to case 23

1. The child has the following syndromes: - infectious toxicosis, - exsicosis, - regurgitation and vomiting.

2. The most likely cause of the disease is an intestinal infection, however, it must be remembered that consuming kefir in such large quantities can lead to functional dyspepsia. In the future, it is necessary to make a differential diagnosis between them using additional clinical and laboratory data.

3. The main cause of the severity of the condition is associated with the syndrome of regurgitation and vomiting, which is primary, infectious toxicosis, exicosis, metabolic disorders are associated with loss of fluid and electrolytes directly due to dyspeptic disorders.

4.

a) body weight deficiency is defined as follows: the proper body weight at this age is:
3300+600+800+750=5450 G. We know the actual body weight At admission, the child's weight turned out to be 5000 g. This means that in 3 days the child lost 5450-5000 = 450 g 450x100: 5450= 8.26%, which corresponds to grade II exicosis.

b) hypotonic type of exsicosis (lethargy, adynamia, decreased muscle tone, tachycardia, deafness of heart tones, low serum K levels).

5. Intestinal infection of unknown etiology, intestinal toxicosis with grade II exicosis, hypotonic type.

6. Unloading of food: an introductory tea break for 8-12 hours, then an adapted low-lactose mixture (fermented milk) - fractional meals of 20-30 ml every 2 hours 10 times a day. Fractional rehydration with Rehydrone, given the presence of repeated vomiting in very small amounts.

- Etiotropic therapy: parenteral cephalosporins, oral aminoglycosides.
- Pathogenetic therapy: correction of water and electrolyte disorders – rehydration infusion therapy with glucose-saline solutions, polarizing mixture (glucose-insulin-potassium mixture), fight against acidosis.
- The second stage is the use of bacteriophages, probiotics, and enzymes.

7. The total amount of fluid is about 190-200 ml / kg of body weight.
Necessary components:
- Colloidal solutions: plasma, 10% albumin solution, rheopolyglucine,
- Crystalloid solutions: 10% glucose solution, Ringer's solution, saline solution, 4-5% potassium chloride solution, B vitamins.

Case 24 **
The boy is 2 months old.
Medical history data: a child from 4 pregnancies to 2 births. The previous pregnancy ended with a medical abortion. The real pregnancy occurred 6 months after the abortion. Course: toxicosis of the 2nd half (nephropathy with edema and proteinuria, in the 3rd trimester she suffered from influenza with symptoms of infectious toxicosis).
Birth at 40 weeks, spontaneous, early discharge of amniotic fluid (10 hours before the rest period), green, cloudy waters. The duration of labor is 4 hours. The child screamed immediately, was applied to the breast for 3 days, took the breast badly, sucked sluggishly. The Apgar score is 7/8 points. Birth weight 4500, length 54 cm. Physiological weight loss - 250 g, by the time of discharge from the hospital, the weight had not recovered. From the moment of birth, there was at first an abundance of regurgitation, and at the time of hospitalization - after almost every feeding.
The data of an objective examination in the admission department: age 2 months, the child is restless, blushes when screaming, there is a tilting of the head and tension of the large fontanel. After adapting to the examination, he calmed down and reacts with positive emotions. The head is dolichocephalic in shape with an overhanging occiput, the seams are not closed, a large fontanel 2x2 cm, slightly tense. Moderate chin tremor, clonus of the lower extremities, expansion of the tendon reflex zone. Grefe's symptom is determined.
1. A presumptive diagnosis?
2. What diseases should be differentiated from?
3. The optimal examination plan?
4. Treatment program?
The answer to problem 24:
1. The child has a perinatal CNS lesion of hypoxic origin with intracranial hypertension syndromes, increased neuro-reflex excitability, regurgitation syndrome. The diagnosis can be established on the basis of medical history data.:
- This pregnancy occurred a short time after the abortion.
- Burdened pregnancy (nephropathy, infectious diseases with symptoms of toxicosis).
- Early discharge of amniotic fluid, they are green, cloudy (signs of chronic intrauterine hypoxia).
- Rapid delivery (duration 4 hours).
- Low score on the Apgar scale (8/9 is acceptable, 9/10 points are ideal)
- Large fetus (the combination of rapid delivery and large fetus creates the prerequisites for hypoxic-traumatic damage to the central nervous system)
Objective inspection data:
Restlessness, tilting of the head and tension of the large fontanel (a sign of intracranial hypertension), overhanging occiput (a sign of intrauterine hypoxia), chin tremor, clonus of the lower extremities, expansion of tendon reflexes (a sign of increased neuro-reflex excitability), Grefe's symptom (a sign of intracranial hypertension).
2. In all cases of intracranial hypertension, especially with tension of the large fontanel, tilting of the head, symptoms of hyperesthesia, it is necessary to make a differential diagnosis.:
- With meningitis - With intracranial hemorrhage - With neurotoxicosis (especially if there are signs of infection).
3. General blood test (to exclude bacterial infection).
Biochemical blood test (electrolytes, protein).
Neurosonography (ultrasound examination of the brain through a large fontanel).

Fundus examination (changes with severe intracranial hypertension)
Consultation with a neurologist
When symptoms of infectious toxicosis are added, a lumbar puncture (diagnostic and therapeutic measure) is indicated.
4. If it is not meningitis or subarachnoid hemorrhage, then all therapeutic measures are aimed at establishing a balance between the production and outflow of cerebrospinal fluid, therefore they are prescribed:
- Diuretics that selectively reduce the formation and increase the outflow of cerebrospinal fluid (diacarb at an initial dose of 60 mg in the morning according to the scheme -3 days to give, day break). Glycerol.
- Asparkam, panangin (to compensate for the resulting deficiency of K and magnesium).
- Glycine (to improve metabolic processes in the brain
- Sedative drugs: phenobarbital, phenibut (to lower the threshold of sensitivity from external receptors).
- Since the patient has regurgitation syndrome associated with dyskinesia of the gastrointestinal tract due to dysregulation of pyloric muscle tone against the background of increased neuro-reflex excitability, it is necessary to prescribe neuroveget blockers (2% solution of diprazine, or aminazine at a dose of 1 mg / kg body weight, a single dose 2 times a day i / m). After feeding, keep the patient upright for 20-30 minutes to remove air from the stomach (aerophagy), prescribe an antireflux mixture for 2-3 weeks.

Case 25 **

The newborn is 9 days old.
Anamnesis data: born from the 1st, normal pregnancy, in term, with a body weight of 3050 g, 50 cm. The umbilical cord residue disappeared on day 4, and the umbilical wound healed quickly. The child had toxic erythema in the maternity hospital. Discharged from the maternity hospital on the 5th day with a body weight of 2,950 g. He was breastfed. There were small pustules on the skin of the mother's breast.
On the 6th day of the child's life, single pustules the size of a pinhead appeared on his face, filled with yellowish contents. The mother didn't think much of it. The child was not bathed.
Objective examination data: 3 days after discharge from the maternity hospital, the district pediatrician noted the presence of multiple pustules on the child's head, trunk, buttocks, and limbs. There were dried pustules with the formation of crusts on the face. The body temperature did not rise, the breathing in the lungs was clear, purulent, the number of breaths was 44 per minute. The heart tones are clear, pure, and the heart rate is 144'. The abdomen is soft, painless, the liver is + 2 cm, the spleen is not palpable. The breast sucks willingly, stools 3-4 times a day without pathological impurities.
Task:
1. Make a diagnosis.
2. Name the factors contributing to the development of this disease.
3. Which pathogen is most often caused by this disease?
4. Is it possible to bathe a child?
5. Prescribe a treatment.
The answer to problem 25:
1. Vesiculopustulosis. The diagnosis can be made based on medical history data.:
- The presence of small pustules on the skin of the breast (a possible cause of infection).
- The appearance on the 6th day of the child's life of single pustules the size of a pinhead, filled with yellowish contents (typical time of occurrence and localization).
- Objective inspection data:
- Multiple pustules on the head, trunk, buttocks, limbs, dried pustules with crusts.
- There are no symptoms of infectious toxicosis, which is typical for vesiculopustulosis.
2. - Decreased immune response due to low IdM content at birth, imperfect phagocytosis.
- Features of the newborn's skin: thin, vulnerable, the epidermis easily separates from the dermis, participates in the release of toxins from the body, incomplete protective function.
- Colonization by microorganisms of the newborn at birth with the formation of a normal ratio of dominant and subdominant flora (75-90% lactic acid: 25-10 conditionally pathogenic). The violation leads to pathological colonization with a predominance of conditionally pathogenic flora.

- Bacterial infection in the mother (pustules on the mammary gland).
3. Staphylococcus aureus, other cocci, opportunistic flora.
4. You can bathe with the addition of a solution of permanganate K (pale pink color) to the water and using baby soap.
5. Each element of the vesiculopustulosis should be opened with a sterile needle and treated with solutions of aniline dyes (brilliant green solution, gentian violet, Castelani paint, an aqueous solution of methylene blue), antibiotics are prescribed only for abundant rashes with an unfavorable premorbid background

Case 26

Boy 4.5 months old
Medical history data: a twin child from the 2nd pregnancy. The first pregnancy ended in a miscarriage. Delivery at the 30th week of pregnancy. Birth weight 1700 g, length 36 cm. He screamed at once. Artificial feeding. I did not receive complementary foods or juices. He gained weight satisfactorily. He was not ill. In the last 2 weeks, the mother began to notice that the child had become sluggish, drowsy, skin paleness had increased, and appetite had decreased.
Objective examination data: moderate condition. The skin and conjunctiva are pale, and the subcutaneous fat layer is well developed. Breathing is puerile, there is no wheezing. The number of breaths is 48 per minute. The heart tones are moderately muted. The heart rate is 154 per minute. The belly is soft, painless. The liver is palpated from under the edge of the costal arch by 3 cm, the spleen by 1.5 cm. The stool is regular.
Total blood count: er. – 3.2x1012/l, Hb – 70 g/l, color index –0.65, platelets – 250,000, leukocytes 5.6x109/l, C.I.-32, lymphocytes - 64, monocytes - 3, eosinophils.- 1, the ESR is 6 mm/hour.
Questions:
1. Which clinical form of anemia is most likely in this case:
2. What are the main causes of anemia in this child?
3. What indicators of serum iron are most likely in this case?
4. Should this child be prescribed iron supplements?
5. List the diseases that contribute to the development of anemia in infants.
The answer to case 26
1. Late anemia of premature babies. The baby was born at 30 weeks of pregnancy with a body weight of 1700 g and a length of 36 cm. In this case, in the absence of iron prophylaxis, iron deficiency anemia always develops due to insufficient iron deposition during pregnancy.
2. Multiple pregnancies, prematurity, artificial feeding, feeding defects (I did not receive juices and complementary foods).
3. Low serum iron levels.
4. As a result, it is necessary to prescribe iron supplements.
5. Prematurity, rickets, hypotrophy.

Case 27*

The girl was transferred to a children's hospital at the age of 9 days from the maternity hospital.
Medical history data. A child from 2 pregnancies (the 1st pregnancy ended with a medical abortion 7 years ago, the 2nd pregnancy is real). Labor on the 1st, at the 39th week, amniotomy, polyhydramnios, light waters, anhydrous period of 9 hours and 40 minutes.
The condition at birth is severe, the cry is very weak, the Apgar score is 3/5 points. Birth weight 3150 g, length 50 cm, pale yellow skin, swelling of limbs, trunk. In the lungs, breathing is puerile, there is no wheezing, the number of breaths is 50 per minute. The heart tones are muted, the heart rate is 158 per minute. The abdomen is enlarged, the liver is 7 cm below the costal arch along the mid-clavicular line, and the spleen is 6 cm below the rib. The stool is meconial, the urine is light yellow.
The mother has a B(III) Rh(-) blood type, the child has A(II) Rh(+). During pregnancy, the mother had a high titer of antiresus antibodies detected once (one month before delivery).

At birth, the child's total bilirubin is 185 mmol/l, hemoglobin is 40 g/l. At the 20th minute of life, a therapeutic measure was performed, after which the condition improved somewhat due to a decrease in edematous syndrome. However, the jaundice persisted, and in the first four days of life, a total of 5 such therapeutic measures were carried out. From the 7th day of life, jaundice began to decrease, edema decreased by the fifth day of life. On day 7, she had a weight of 2750 g, after that she began to gain weight gradually. The umbilical cord residue disappeared on the 7th day.
Objective examination data upon admission: body temperature 36.5 degrees, weight 2800, head circumference 33.5, chest 31 cm.
The condition is severe, the cry is quiet, there is lanugo on the shoulders and auricles, the umbilical ring is located low. The skin is icteric, dry, cyanosis of the nasolabial triangle, cyanosis of the feet, palms. Umbilical wound with serous discharge, there is swelling of the lower part of the trunk and limbs. The large fontanel is 1x1 cm. In the lungs, breathing is puerile, there is no wheezing. The number of breaths is 44 per minute. Heart tones are loud, systolic murmur is at the top, and the boundaries of relative cardiac dullness are within the age norm. The heart rate is 160 per minute. The abdomen is soft, the liver is +3 cm, the spleen is +1.5 cm. The stool is yellow, the urine is light. Motor activity is reduced, reflexes of newborns are reduced, an unstable symptom of Grefe.
The child is being artificially fed with an adapted 70 ml formula 7 times a day.
Complete blood count: Hb 116 g/l, er. 4.1x1012/l, platelets 143 x 109/l, Le -8.3x109/l, myel.-2, metamyel.-1, P.ya.-2, S.ya.-60, E.-1, L.-26, M.-7. cell size-1, ESR-4 mm/hour.
Blood biochemistry: protein 70 g/l, urea 4.2 mmol/L, cholesterol 3.8 mmol/L, direct - no bilirubin, indirect – 250 mmol/l.
Task:
1. Make a diagnosis.
2. What causes the severity of the child's condition?
3. Schedule a further examination.
4. Which treatment event was held in the hospital 5 times. Other methods of treating this disease?
5. Prognosis.
The answer to case 27
1. Edematous form of hemolytic disease of newborns.
Rationale: incompatibility of the Rh factor in the fetus and pregnant woman, high titers of antiresus antibodies, edema, enlarged liver, low hemoglobin, high indirect bilirubin.
2. The severity of the condition is due to a high level of total bilirubin 185 mmol / l, a low hemoglobin content of 40 g / l, as a result of which hypoxia of the newborn is noted with a low score on the Apgar scale of 3/5 points. Increasing anemia and hypoxia required a 5-fold replacement blood transfusion.
3. Examination plan: monitoring of hemoglobin, erythrocytes, indirect and direct bilirubin levels to monitor the rate of hemolysis and prevent the possibility of bilirubin encephalopathy), determination of the hourly increase in bilirubin, observation by a neurologist.
4. Replacement blood transfusion was performed 5 times in the hospital in order to compensate for the deficiency of red blood cells and hemoglobin. Phototherapy can be recommended for photochemically converting water-insoluble bilirubin into its water-soluble isomer, infusion therapy using colloids to bind and transport indirect bilirubin, as well as solutions
glucose for the energy supply of conjugation. The use of choleretic drugs is also justified in order to prevent bile thickening syndrome and intrahepatic cholestasis.
5. The prognosis is unfavorable, given that there remains a high rate of indirect bilirubin in a child with a severe form of hemolytic disease of the newborn (possibly intrauterine brain damage

Assessment criteria (assessment tool — Case-task)

Grade	Assessment criteria
pass	The student identified the basic components of the task. I considered possible solutions to the

Grade	Assessment criteria
	problem. Competently, logically, and reasonably formed his own judgments and assessments. He showed the ability to interpret complaints, anamnesis of the disease and life, identify common and specific signs of the disease; to build an examination plan for the patient, taking into account standards and interpret additional examination methods (laboratory and instrumental), taking into account the norm. He prescribed the treatment correctly.
fail	The student discovered significant gaps in the knowledge of the basic educational and program material, made fundamental mistakes in solving the problem.

5.3.9 Model assignments (assessment tool - Test) to assess the development of the competency УК-1

1* Infection and development of intrauterine infection during the period of embryogenesis leads to:

A) the birth of a child with signs of intrauterine hypotrophy,

B) the formation of morpho-functional immaturity

C) the development of gross organ defects +

2* A woman got rubella at 8 weeks gestation. What can we expect?:

A) the birth of a child with morpho-functional immaturity,

B) the development of intrauterine hypotrophy,

C) the formation of gross malformations +

3* Causes contributing to delayed physical development of children after birth

A) hypofunction of the thyroid gland; +

B) congenital heart defects; +

C) artificial feeding from the age of 2 months;

D) active motor mode;

E) chromosomal diseases +

4 Specify hormones that promote the growth of the child**

A) aldosterone;

B) STG; +

C) ACTH;

D) thyroid; +

E) insulin+

5* Which of the listed statements relate to the indicators of physical development of children under 1 year of age:

A) timelyappearance of baby teeth; +

B) body weight; +

C) growth; +

D) static functions; +

E) proportionality of development. +

6* Specify the average child's body weight at 1 year old:

A) 8 kg;

B) 9 kg;

C) 10.4-10.7 kg; +

D) 11-1.5 kg;

E) 12 kg.

7* What foods (other than breast milk) should a 5-month-old baby receive when he is on natural feeding?

a) cottage cheese

b) fruit puree (grated apple) +

c) vegetable puree +

d) meatsouffle

e) porridge +

f) hard-boiled egg yolk - 1/4

g) fruit juice

8 The severity of hypotrophy is determined mainly by:**

A) body weight deficiency; +

B) by the nature of the chair;

C) changes in appetite;

D) intestinal dysfunction;

E) for metabolic disorders;

F) according to the frequency of acute respiratory viral infections;

G) condition of subcutaneous fat +

9 Causes of vitamin D deficiency:**

A) insufficient intake of vitamin D from food; +

B) impaired absorption of vitamin D and minerals in the intestine; +

C) damage to the hepatobiliary system;

D) insufficient solar insolation; +

E) kidney diseases involving tubolointerstition+

F) taking anticonvulsants, glucocorticoids+

G) feeding the child with adapted mixtures

10* Hemolytic anemia is characterized by:

a) hemorrhagic syndrome

b) jaundice +

c) bradycardia

11* Hemolytic anemia is characterized by:

a) a decrease in platelets

b) decrease in white blood cells

c) increase in the number of reticulocytes +

d) decrease in the number of reticulocytes

12 In children with untreated congenital adrenal cortex dysfunction (ADCN) height:**

a) above average

b) below average +

c) average

13* Pyelonephritis is characterized by:

a) acidosis

b) bacteriuria +

c) azotemia

d) leukocyturia +

14 What are the symptoms of acute leukemia?**

a) jaundice

b) bleeding +

c) swelling

d) enlargement of lymph nodes +

e) pallor of mucous membranes +

15 Are changes in blood count more typical for acute leukemia?**

a) neutropenia +

b) erythrocytosis +

c) thrombocytopenia

d) hypochromia of red blood cells

e) reticulocytosis

e) blast cells +

16* Typical changes in blood count in chronic myeloid leukemia.**

a) leukopenia

b) hyperleukocytosis +

c) left-shifted neutrophilosis +

d) erythrocytehypochromia

e) significant increase in blast cells

17 Reliable sex determination in the virile form of adrenogenital syndrome is possible by:**

a) testicular palpation;

b)definitions of 17-oxycorticosteroids;

c) determination of sex chromatin;

d) karyotype determination; (+)

e) histological examination of gonads.

18** Plasma cells that directly synthesize antibodies are formed from:

a) B-lymphocytes; (+)

b) neutrophils;

c) basophils;

d) macrophages;

e) T-lymphocytes.

19 Indicators of humoral immunity include:**

a) levels of immunoglobulins A, M,G, E. (+)

b) parameters of phagocytosis;

c) the reaction of blast transformation of leukocytes;

d) the rosette formation reaction;

e) the number of normal killer cells (DM 16)

20* Class A immunoglobulins are mainly produced by the lymphoid tissue of the mucous membranes:**

a) the appendix;

b) bronchi;

c) Pirogov's pharyngeal ring;

d) small intestine; (+)

e) genitourinary system.

21* Principles of treatment of pyloric stenosis:

A) the use of antispasmodics,

B) drugs that stimulate peristalsis,

C) antiemetic drugs,

D) surgical treatment +

E) correction of water and electrolyte disorders +

22* What signs can be considered as symptoms of dehydration:

A) rigidity of occipital muscles;

B) occlusion of the large fontanel+

C) oliguria+

D) reduction of tissue turgor+

E) diaper rash of the intercostal folds.

23In what cases can dehydration syndrome be accompanied by shock?**

A) if dehydration persists for a long time;

B) with the rapid development of dehydration;

C) with the second and third degree of dehydration.

24*Specify the symptom characteristic of diabetic ketoacidosis:

a) shortness of breath +

b) edema

c) bradycardia

d) increased blood pressure

25 A sign characteristic of hypoglycemic coma:**

a) dry skin

b) bradycardia +

c) blush on the cheeks

d) lowering blood pressure

26 Conditions requiring immediate correction in acute renal failure:**

a) hyperparathyroidism

b) hypoproteinemia

c) hypervolemia +

d) hyperkalemia +

e) acidosis +

e) aminoaciduria

g) uremia +

27* Blood clotting capacity in hemorrhagic vasculitis changes towards:

a) hypocoagulation,

b) hypercoagulation, +

c) does not change

28 Damage to the vascular wall in hemorrhagic vasculitis is caused by:**

a) bacterial toxins,

b) immune complexes, +

c) viruses,

d) protozoa

29Preventive vaccinations for a child who has suffered from an acute respiratory illness can be allowed after recovery no earlier than after:**

a) 2 weeks;

b) 1 month; (+)

c) 2 months;

d) 3 months;

e) 3.5 months.

30* With chronic alcoholism of the mother, the fetus develops:

A) intrauterine growth retardation +

B) intrauterine infection

C) Down syndrome

D) stigmas of dysembriogenesis +

E) the immaturity of the surfactant +

31* The main clinical manifestations of pylorospasm:

A) regurgitation, the volume of less than eaten food, +

B) vomiting like a fountain,

C) diarrhea,

D) constipation

E) neurological disorders +

32* One of the listed drugs is most effective for the treatment of mycoplasma pneumonia

a) penicillin

b) clarithromycin +

c) gentamicin

d) lincomycin

33* Clinical manifestations of initial rickets:**

A) enlargement of the frontal and parietal tubercles;

B) craniotabs;

C) convulsive syndrome;

D) excessive sweating; +

E) baldness on the back of the head; +

F) fearfulness, sleep disturbance. +

34* The period of the height of rickets is characterized by:**

A) hypocalciuria; +

B) hypophosphaturia;

C) visible bone changes +

D) late appearance of baby teeth +

E) moderatehypocalcemia; +

F) severe hypophosphatemia;

G) increased activity of alkaline phosphatase in the blood+

35 Possible complications of hypervitaminosis "D":**

A) early closure of the large fontanel+

B) spasmophilia

C) pneumosclerosis

D) calcification of the vessels of the kidneys, myocardium and brain+

E) urolithiasis+

36* Causes of physiological jaundice:

a) hemolysis

b) decreased glucuronyltransferase activity

c) decreased glucuronyltransferase activity and hypoalbuminemia

d) decreased glucuronyltransferase activity, hypoalbuminemia,

hemolysis +

37*With hyperbilirubinemia in newborns, nuclear jaundice may develop if the level of indirect bilirubin increases to:

a) 50 mmol/l at normal protein levels

b) 150 mmol/l

c) 250 mmol/l

d) 340 mmol/l +

38* Hyperbilirubinemia, caused mainly by an increase in the level of direct bilirubin, is characteristic of:

a) conjugation jaundice

b) hemolytic disease of the newborn

c) Minkovsky-Schaffar anemia

d) biliary tract atresia +

39* Hyperbilirubinemia, caused mainly by an increase in the level of indirect bilirubin in newborns, is characteristic of:

a) hemolytic disease,

b) biliary tract atresia

c) fetal hepatitis

d) asphyxia

40* What kind of disease can you think about when you have epigastric pain that occurs 20-30 minutes after eating?

a) pyelonephritis,

b) cholecystitis,

c) chronic gastritis +

d) appendicitis.

41* Which drug is indicated for erosive gastroduodenitis:

a) prednisone,

b) diuretics,

c) de-nol, +

d) choleretic therapy.

42* Complication typical of type I diabetes mellitus in the acute period:

a) hemorrhagic syndrome

b) vulvitis +

c) arthritis

43* A vital drug used in type I diabetes mellitus:

a) panzinorm

b) actrapid +

c) no-shpa

d) cortinef

44* Hypothyroidism is characterized by:

a) macroglossia;+

b) prolonged jaundice;+

c) a tendency to hypothermia;+

d) premature closure of the fontanel;

e) constipation.+

45* Phenylketonuria is dominated by:**

a) intestinal damage and increasing hypotrophy;

b) hematopoiesis depression;

c) neurological symptoms; (+)

d) eczema and albinism;

e) nephropathy.

46*The level of resistance of the child's body is determined by:**

a) the frequency of acute illnesses suffered by the child during

the year of life preceding the examination; (+)

c) the severity of acute illnesses;

d) the number of exacerbations of chronic diseases.

47 The main clinical manifestations of chalasia:**

A) gastro-esophageal reflux +

B) vomiting like a fountain,

C) diarrhea,

D) constipation

E) insufficient weight gain +

48 The main clinical manifestations of pyloric stenosis:**

A) moderate regurgitation,

B) vomiting like a fountain+

C) diarrhea,

D) constipation +

49 What are the main signs of intestinal infection when making a differential diagnosis with non-infectious diarrhea:**

A) the multiplicity and character of the chair;

B) exicosis and dystrophy;

C) acute onset, infectious toxicosis, symptoms of enterocolitis+

D) the dependence of intestinal syndrome on breastfeeding

5.3.10 Model assignments (assessment tool - Test) to assess the development of the competency ПК-2

***Principles of treatment of pyloric stenosis:**

A) the use of antispasmodics,

B) drugs that stimulate peristalsis,

C) antiemetic drugs,

D) surgical treatment +

E) correction of water and electrolyte disorders +

***What signs can be considered as symptoms of dehydration:**

A) rigidity of occipital muscles;

B) occlusion of the large fontanel+

C) oliguria+

D) reduction of tissue turgor+

E) diaper rash of the intercostal folds.

****In what cases can dehydration syndrome be accompanied by shock?**

A) if dehydration persists for a long time;

B) with the rapid development of dehydration;

C) with the second and third degree of dehydration.

***Specify the symptom characteristic of diabetic ketoacidosis:**

a) shortness of breath +

b) edema

c) bradycardia

d) increased blood pressure

****A sign characteristic of hypoglycemic coma:**

a) dry skin

b) bradycardia +

c) blush on the cheeks

d) lowering blood pressure

****Conditions requiring immediate correction in acute renal failure:**

a) hyperparathyroidism

b) hypoproteinemia

c) hypervolemia +

d) hyperkalemia +

e) acidosis +

f) aminoaciduria

g) uremia +

***Blood clotting capacity in hemorrhagic vasculitis changes towards:**

a) hypocoagulation,

b) hypercoagulation, +

c) does not change

****Damage to the vascular wall in hemorrhagic vasculitis is caused by:**

a) bacterial toxins,

b) immune complexes, +

c) viruses,

d) protozoa

Assessment criteria (assessment tool — Test)

Grade	Assessment criteria
outstanding	100% correct answers
excellent	90-99% correct answers
very good	80-89% correct answers
good	70-79% correct answers
satisfactory	56-69% correct answers
unsatisfactory	50-55% correct answers
poor	less than 49% correct answers

6. Учебно-методическое и информационное обеспечение дисциплины (модуля)

Основная литература:

1. Баранов А.А. Педиатрия : практическое руководство / Баранов А.А. - Москва : ГЭОТАР-Медиа, 2014. - 768 с. - ISBN ISBN 978-5-9704-2787-3., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=734173&idb=0.
2. Пропедевтика детских болезней / Кильдиярова Р.Р., Макарова В.И. - Москва : ГЭОТАР-Медиа, 2022., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=790693&idb=0.
3. Детские болезни / Баранов А.А. - Москва : ГЭОТАР-Медиа, 2012., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=634602&idb=0.
4. Кильдиярова. Детские болезни : учебник / Кильдиярова. - Москва : ГЭОТАР-Медиа, 2022. - 800 с. - ISBN 978-5-9704-7770-0., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=869897&idb=0.
5. Кильдиярова Р.Р. Поликлиническая и неотложная педиатрия : учебник / Кильдиярова Р.Р.; Макарова В.И. - Москва : ГЭОТАР-Медиа, 2021. - 496 с. - ISBN 978-5-9704-6082-5., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=736563&idb=0.
6. Кильдиярова Р.Р. Симптомы и синдромы в педиатрии : практическое руководство / Кильдиярова Р.Р.; Латышев Д.Ю. - Москва : ГЭОТАР-Медиа, 2022. - 272 с. - ISBN 978-5-9704-7216-3., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=807697&idb=0.
7. Клинические рекомендации. Неонатология : учебное пособие. - Москва : ГЭОТАР-Медиа, 2021. - 320 с. - ISBN 978-5-9704-6213-3., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=775213&idb=0.
8. Детская эндокринология / Дедов И.И., Петеркова В.А., Малиевский О.А., Ширяева Т.Ю. - Москва : ГЭОТАР-Медиа, 2022., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=790086&idb=0.
9. Усанова А.А. Ревматология : учебное пособие / Усанова А.А. - Москва : ГЭОТАР-Медиа, 2023. - 408 с. - ISBN 978-5-9704-7448-8., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=809626&idb=0.
10. Авдеева Т.Г. Детская гастроэнтерология : практическое руководство / Авдеева Т.Г.; Парменова Л.П.; Мякишева Т.В. - Москва : ГЭОТАР-Медиа, 2019. - 272 с. - ISBN 978-5-9704-5198-4., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=734668&idb=0.
11. Ровбуть Т. И. Педиатрия : пособие для студентов учреждений высшего образования, обучающихся по специальности 1-79 01 01 «лечебное дело» [на англ. яз.] = pediatrics: the manual for the students of the faculty of international students / Ровбуть Т. И.,Тихон Н. М.,Лукша А. В. - Гродно : ГрГМУ, 2020. - 204 с. - Книга из коллекции ГрГМУ - Медицина. - ISBN 978-985-595-291-7., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=803864&idb=0.
12. Anatomical and Physiological Features and Diseases of Childhood : Tutorial for English-Speaking Medical Students. Ч. 2. Anatomical and Physiological Features and Diseases of Childhood. Part II. - Ставрополь : СтГМУ, 2020. - 192 с. - Книга из коллекции СтГМУ - Медицина. - ISBN 978-5-89822-645-9., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=801037&idb=0.
13. Anatomical and Physiological Features and Diseases of Childhood : Tutorial for English-Speaking Medical Students. Ч. 1. Anatomical and Physiological Features and Diseases of Childhood. Part I. - Ставрополь : СтГМУ, 2020. - 276 с. - Книга из коллекции СтГМУ - Медицина. - ISBN 978-5-89822-643-5., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=801036&idb=0.

Дополнительная литература:

1. Кардиология детского возраста. Врожденные пороки сердца у детей в практике врача-педиатра первичного звена здравоохранения : учебное пособие для студентов педиатрического факультета специальность 31.05.02 «педиатрия» / Гордиенко Л. М.,Вялкова А. А.,Мещерякова А. И.,Плотникова С. В.,Карымова Г. К.,Вялковой А. А. - Оренбург : ОрГМУ, 2022. - 111 с. - Книга из коллекции ОрГМУ - Медицина., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=866982&idb=0.
2. Кардиология детского возраста / Царегородцев А.Д., Белозёров Ю.М., Брегель Л.В. - Москва : ГЭОТАР-Медиа, 2014., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=640140&idb=0.
3. Неонатология: реабилитация при патологии ЦНС : Учебное пособие для вузов / под общ. ред. Коноваловой Н.Г. - 2-е изд. - Москва : Юрайт, 2021. - 208 с. - (Высшее образование). - ISBN 978-5-534-08275-3. - Текст : электронный // ЭБС "Юрайт"., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=760552&idb=0.
4. Research Anthology on Pediatric and Adolescent Medicine. - IGI Global, 2022. - 1 online resource. - ISBN 9781668453612. - ISBN 9781668453605. - Текст : электронный., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=856396&idb=0.
5. Viral intestinal infections in children: diagnosis, treatment, prevention : study guide / Gonchar N. V.,Ermolenko K. D.,Lobzin Y. V.,Skripchenko N. V. - Санкт-Петербург : СЗГМУ им. И.И. Мечникова, 2022. - 44 с. - Книга из коллекции СЗГМУ им. И.И. Мечникова - Медицина. - ISBN 978-5-89588-273-3., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=864253&idb=0.
6. Gomellya M. V. Hemorrhagic diseases in children : study guide / Gomellya M. V.,Krupskaya T. S. - Иркутск : ИГМУ, 2021. - 81 с. - Книга из коллекции ИГМУ - Медицина., https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=867564&idb=0.

Программное обеспечение и Интернет-ресурсы (в соответствии с содержанием дисциплины):

- http://www.medlit.ru/medrus/jrnls.htm-Журналы, выходящие в издательстве «МЕДИЦИНА»
- http://www.rusmedserv.com/
- http://www.rosmedic.ru/pediatriya-i-neonatologiya/ (электронные учебники по педиатрии и неонатологии)
- http://medlinks.ru/eng/basi.htm- медицинские базы данных
- http://www.medliter.ru/ (электронные медицинские книги)
- http://www.nlm.nih.gov/- PubMed- главная медицинская поисковая система
- Консультант студента : ЭБС. – Москва : ООО «ИПУЗ». - URL:http://www.studmedlib.ru
- Консультант врача. Электронная медицинская библиотека : ЭБС. –Москва : ООО ГК «ГЭОТАР».
- URL: http://www .rosmedlib . ru
- UpToDate:БД / Wolters Kluwer Health. – URL: www.uptodate.com
- Научная электронная библиотека eLIBRARY. - URL: http://elibrary.ru
- Scopus / Elsevier Inc., Reed Elsevier. – Philadelphia: Elsevier B.V., PA. –URL: http://www.scopus.com/ (Нацпроект)
- Web of Science / Clarivate Analytics. - URL: http://apps.webofknowledge.com
- Единое окно доступа к информационным ресурсам. - URL:http://window.edu.ru/
- Федеральная электронная медицинская библиотека Минздрава России. - URL: http://www.femb.ru/feml/, http://feml.scsml.rssi.ru
- Free Medical Journals. - URL: http://freemedicaljournals.com
- Free Medical Books. - URL: http://www.freebooks4doctors.com/

- International Scientific Publications.–URL: https://www.scientificpublications.net/ru/
- КиберЛенинка:науч. электрон. биб-ка. - URL: http :// cyberleninka.ru/
- Архив научных журналов / НЭИКОН. - URL:https :// archive . neicon .ru / xmlui /
- Журналы открытого доступа на русском языке / платформа ElPub НЭИКОН. – URL: https://elpub.ru/
- Всемирная организация здравоохранения. - URL: http://who.int/ru/

7. Материально-техническое обеспечение дисциплины (модуля)

Учебные аудитории для проведения учебных занятий, предусмотренных образовательной программой, оснащены мультимедийным оборудованием (проектор, экран), техническими средствами обучения, компьютерами, специализированным оборудованием: Мультимедийное оборудование

Помещения для самостоятельной работы обучающихся оснащены компьютерной техникой с возможностью подключения к сети "Интернет" и обеспечены доступом в электронную информационно-образовательную среду.

Программа составлена в соответствии с требованиями ФГОС ВО по направлению подготовки/специальности 31.05.01 - General Medicine.

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