

1. A newborn girl has Apgar score of 7-8 points at the 1-5 minutes after birth. During the labor there was a brief difficulty with extraction of the shoulder girdle. After birth the baby presents with disturbed function of the proximal segment and forced position of the right arm. The shoulder is rotated inwards, the elbow is extended, the forearm is pronated, and the whole upper limb resembles an arm of a doll. What is the most likely clinical diagnosis in this case?

- A. Thoracic spine trauma
- B. Osteomyelitis of the right arm
- C. Intracranial hemorrhage
- D. Erb-Duchenne palsy
- E. Soft tissue injury of the right arm

2. Disease onset was acute. A child developed general weakness, pain in the joints, and elevated temperature. Later these signs became accompanied by itching skin rash manifested as erythematous spots 2-5 mm in size. The rash gradually turned hemorrhagic. Large joints are painful and swollen; pain attacks periodically occur in the paraumbilical area; there are signs of intestinal hemorrhage. What is the most likely diagnosis?

- A. Hemorrhagic vasculitis (Henoch-Schönlein purpura)
- B. Scarlet fever
- C. Hemorrhagic meningococcal meningitis
- D. Streptococcal impetigo
- E. Rheumatism

3. A 13-year-old girl for the last two weeks has been complaining of dyspnea and shin and foot edemas that appear after a physical exertion. In the morning the edemas significantly decrease. Clinical examination revealed enlarged liver and coarse systolic murmur over the heart area. Blood test and urinalysis are without changes. What is the most likely cause of edemas in this child?

- A. Hepatic cirrhosis
- B. Heart failure
- C. Nephrotic syndrome
- D. Acute pyelonephritis
- E. Angioneurotic edema

4. A 7-year-old boy has severe pulmonary mucoviscidosis (cystic fibrosis). He complains of dyspnea and blood expectoration. Objectively he presents with lagging physical development, acrocyanosis, hepatomegaly, drumstick fingers, and nail plates resembling a "clock face". Provisional diagnosis of chronic pulmonary heart disease is made. What examination would be the most informative for diagnosis confirmation?

- A. Doppler echocardiography
- B. Electrocardiography
- C. Chest X-ray
- D. Rheography of the pulmonary artery
- E. Ultrasound of the liver

5. Mother of a 5-year-old child noticed on the head of her child a round "bald" spot 3 cm in diameter. All the hairs in the focus are broken off at the length of 5-6 mm. The day before the child was petting a stray cat. Make the diagnosis:

- A. Superficial trichophytosis
- B. Deep trichophytosis

- C. Psoriasis
- D. Microsporia
- E. Alopecia areata

6. A 2-year-old child with persisting cough and subfebrile body temperature after a case of URTI developed dyspnea, cyanosis of the nasolabial triangle, percussion dullness and weakened respiration in the lower lobe of the right lung, and a slight mediastinal displacement to the left. What pulmonary pathology is likely to cause this clinical presentation?

- A. Emphysema
- B. Pleurisy
- C. Pneumonia
- D. Atelectasis
- E. Bronchitis

7. During examination a 4-month-old child with meningococemia presents with acrocyanosis, cold extremities, tachypnea, and thready pulse, blood pressure of 30/0 mm Hg, anuria, and sopor. What clinical syndrome is it?

- A. Toxic shock syndrome
- B. Neurotoxicosis
- C. Exicosis
- D. Encephalic syndrome
- E. Acute renal failure

8. At night a 2-year-old child with upper respiratory tract infection suddenly developed dyspnea with labored inspiration. Objectively the skin is pale, perioral cyanosis and slight acrocyanosis are observed. Breathing is loud, respiration rate is 32/min. Jugular, supra- and infraclavicular fossae retract during breathing. Respiration is coarse on auscultation. Heart sounds are clear and sonorous, heart rate is 120/min. What condition was complicated by the development of the upper respiratory tract infection?

- A. Airway foreign body
- B. Obstructive bronchitis
- C. Stenosing laryngotracheitis
- D. Bronchiolitis
- E. Bronchial asthma

9. A 1-year-old child with a case of URTI suddenly developed noisy respirations with difficult inspiration, intercostal retractions, and barking cough on the 2nd night after the disease onset. What is the most likely diagnosis?

- A. Stenosing laryngotracheobronchitis
- B. Acute pulmonary inflammation
- C. Bronchial asthma
- D. Acute bronchitis
- E. Acute bronchiolitis

10. A 10-year-old boy with symptoms of arthritis and myocarditis was brought to a hospital. Based on clinical examination the provisional diagnosis of juvenile rheumatoid arthritis was made. What symptom is the most contributive for the diagnostics of this disease?

- A. Regional hyperemia of the joints
- B. Affection of the large joints

- C. Reduced mobility of the joints in the morning
- D. Enlarged heart
- E. Increased heart rate

11. A 7-year-old girl has been twice treated with antibacterial agents for urinary tract infection. US shows no severe renal defects. The child presents with recurrence of leukocyturia and bacteriuria, elevated body temperature up to 38.5°C, and pain in her left lumbar area. What examination should be conducted first to clarify the cause of urinary infection recurrence?

- A. Excretory urography
- B. Retrograde pyelography
- C. Immunogram
- D. Micturating cystourethrography
- E. Radioisotope renography

12. A child is 1 year old. After solid food was introduced into the diet, within the last several months the child developed loss of appetite, diarrhea with large amount of feces, and occasional vomiting. Body temperature remains normal. Body weight is 7 kg. The child is very pale, has leg edemas and extremely distended abdomen. Feces analysis detects high levels of fatty acids and soaps. Diagnosis of celiac disease was made and gluten-free diet was prescribed. What should be excluded from the diet in this case?

- A. Cereals - wheat, oats
- B. Milk and dairy products
- C. Fruits
- D. Animal protein
- E. Easily digestible carbohydrates

13. A 7-year-old boy has been an inpatient for 1.5 months. He had been brought to the hospital with complaints of edemas all over his body, low urine output, and headache. Clinical urinalysis: proteins - 7.1 g/L, leukocytes - 1-2 in the vision field, erythrocytes - 3-4 in the vision field. During the course of treatment the edemas gradually dissipated, headache abated, diuresis normalized. Daily urine proteins - 3 g/L. Biochemical blood test: total protein - 43.2 g/L, urea - 5.2 mmol/L, cholesterol - 9.2 mmol/L. What glomerulonephritis syndrome is the most likely to be present in the patient?

- A. Nephritic
- B. Isolated urinary
- C. Nephrotic
- D. Hematuric
- E. Mixed

14. A 3-month-old child with signs of rickets presents with positive Chvostek, Trousseau, and Maslov signs. One day ago the parents witnessed a cyanotic attack in their child - the child broke into a cold sweat, the eyes bulged, and respiratory arrest occurred. One minute later the child drew in a loud breath and the child's condition normalized again. What is the cause of the described signs of the disease?

- A. Decrease of blood calcium levels
- B. Increase of blood calcium levels
- C. Decrease of blood phosphorus levels
- D. Increase of blood phosphorus levels
- E. Metabolic acidosis

15. A newborn with gestational age of 31 weeks presents with hypotonia and depressed consciousness. Hematocrit is 35%, general cerebrospinal fluid analysis shows increased content of erythrocytes and protein, and low glucose. These data correspond with the clinical presentation of:

- A. Intracranial hemorrhage
- B. Meningitis
- C. Sepsis
- D. Anemia
- E. Intrauterine infection

16. A newborn has Apgar score of 9. When should this infant be put to the breast?

- A. After 12 hours
- B. After 2 hours
- C. On the 2nd day
- D. On the 3rd day
- E. In the delivery room

17. A 3-week-old infant developed large, flaccid vesicles with purulent contents on the skin of chest and abdomen. The vesicles rupture quickly. Make the provisional diagnosis:

- A. Pemphigus neonatorum
- B. Vesiculopustulosis
- C. Toxic erythema
- D. Pemphigus syphiliticus
- E. Pseudofurunculosis

18. 10 hours after birth a child developed jaundice, hypotonia, hyporeflexia, and moderate hepatosplenomegaly. Feces and urine are of normal color. Umbilical cord blood bilirubin is 51 $\mu\text{mol/L}$ due to unconjugated bilirubin levels. In venous blood: erythrocytes - $3.5 \cdot 10^{12} /\text{L}$, Hb- 140 g/L, reticulocytes - 1.5%, bilirubin - 111 $\mu\text{mol/L}$, conjugated - 11 $\mu\text{mol/L}$, ALT- 40 U/L, AST- 30 U/L. Mother's blood group is A(II) Rh(-), child's blood group is A(II) Rh(+). What laboratory test can confirm the diagnosis?

- A. Viral hepatitis markers analysis
- B. Coombs test
- C. Measurement of erythrocyte osmotic resistance
- D. Erythrocytometry
- E. Measurement of glucose 6-phosphate dehydrogenase levels in erythrocytes

19. A 6-month-old child on breastfeeding is hospitalized in the inpatient department. After the child recovers, the doctor recommends the mother to start introducing solid food to the child's diet. What products should be introduced to the child's diet first?

- A. Vegetable puree
- B. Fermented dairy products
- C. Grated apple
- D. Semolina porridge
- E. Buckwheat porridge

20. The 5-year-old child has been ill for 2 weeks. Cough attacks developed first and were then followed by reprises. During coughing the child's face turns red and cervical veins bulge. The cough attacks induce vomiting. X-ray shows intensified bronchial pattern. Blood

test: leukocytes - $16 \cdot 10^9/L$, lymphocytes - 72%, erythrocyte sedimentation rate - 4 mm/hour. What is the most likely diagnosis?

- A. Obstructive bronchitis
- B. Pertussis
- C. Pneumonia
- D. Adenovirus infection
- E. Foreign body

21. A 3-year-old child presents with dyspnea that abates in the sitting position, occasional loss of consciousness and seizures, delayed physical development, cyanosis, drumstick fingers. Echocardiography detects aortic dextroposition, ventricular septal defect, pulmonary artery stenosis, and right ventricular hypertrophy. What is the most likely diagnosis?

- A. Tetrad of Fallot
- B. Coarctation of the aorta
- C. Transposition of the great vessels
- D. Ventricular septal defect
- E. Acquired valvular disease

22. A 15-year-old girl complains of dizziness and sensation of lack of air that she develops in emotionally straining situations. Relief occurs after she takes corvalol. Objectively: hyperhidrosis and marble-like pattern of the skin of her palms and feet. Clinical and instrumental examination revealed no organic changes in the central nervous, cardiovascular, and respiratory systems. What provisional diagnosis can be made?

- A. Somatoform autonomic dysfunction
- B. Obstructive bronchitis
- C. Bronchial asthma
- D. Stenosing laryngotracheitis
- E. Acute epiglottitis

23. A 1.5-month-old child on breastfeeding presents from birth with daily vomiting, irregular liquid foamy feces, and meteorism, which are resistant to antibacterial and probiotic therapy; no increase of body mass is observed. The child's condition improved, when breastmilk was substituted with "NAN low lactose" formula. What pathology is it?

- A. Intestinal lamblia (Giardiasis)
- B. Infectious enteritis
- C. Drug-induced enteritis
- D. Lactase deficiency
- E. Functional dyspepsia

24. A 13-year-old girl for a month has been complaining of fatigability, dull pain in her right subcostal area, abdominal distension, and constipations. Abdominal palpation reveals positive Kehr, Murphy, and Ortner signs, while Desjardins and Mayo-Robson points are painless. Total bilirubin is 14.7 $\mu\text{mol/L}$, predominantly indirect, ALT- 20 U/L, AST- 40 U/L, amylase - 6.3 mmol/L . Echocholangiography shows practically no contraction of the gallbladder. Make the provisional diagnosis:

- A. Hyperkinetic biliary dyskinesia
- B. Hypokinetic biliary dyskinesia
- C. Chronic pancreatitis
- D. Acute pancreatitis
- E. Chronic hepatitis

25. A 22-day-old infant developed subcutaneous red nodes from 1.0 to 1.5 cm in size on the scalp; later the nodes suppurate. Temperature increased up to 37.7 °C, intoxication symptoms appeared, regional lymph nodes enlarged. Complete blood count: anemia, leukocytosis, neutrocytosis, increased ESR. What diagnosis can be made?

- A. Pseudofurunculosis
- B. Pemphigus
- C. Vesiculopustulosis
- D. Scalp phlegmon
- E. –

26. A 10-year-old boy was brought into the hospital with complaints of expiratory dyspnea, respirations are 30/min. He explains his state by a change in the weather conditions. For the last 4 years the boy has been registered for regular check-ups due to his diagnosis of third degree persistent bronchial asthma. To provide emergency aid for this child, first he needs to be given:

- A. Salbutamol or short-acting β_2 -agonists
- B. Dexamethasone
- C. Adrenaline
- D. Euphylline (Aminophylline)
- E. Claritin (Loratadine)

27. A 3-year-old child has been brought to a hospital with complaints of pain in the legs, fever, and loss of appetite. Objectively: pale skin and mucosa, hemorrhagic rash. Lymph nodes are enlarged, painless, dense and elastic, not matted together. Bones, joints, and abdomen are painful. The liver and spleen are enlarged. Hemogram: Hb- 88 g/L, color index - 1.3, platelets - $80 \cdot 10^9/L$, leukocytes - $25.8 \cdot 10^9/L$, lymphoblasts - 70%, ESR- 52 mm/hour. Make the provisional diagnosis:

- A. Acute leukemia
- B. Thrombocytopenic purpura
- C. Acute rheumatic fever
- D. Infectious mononucleosis
- E. Hemorrhagic vasculitis (Henoch-Schonlein purpura)

28. During an outdoor school event in hot weather, a 10-year-old girl lost her consciousness. Body temperature - 36.7 °C. Objectively her skin is pale and cold to touch, her pupils are dilated. Blood pressure - 90/50 mm Hg. Heart rate - 58/min. What pathology occurred in this case?

- A. Sympathicotonic collapse
- B. Syncope
- C. Paralytic collapse
- D. Sunstroke
- E. –

29. A 13-year-old girl has 30% of excessive body mass, she started to gain weight at the age of 3. She has a family history of obesity. Her height and sexual development are normal for her age. The appetite is excessive. She complains of periodical headaches. Blood pressure - 120/80 mm Hg. Subcutaneous fat is evenly distributed, she has no stretch marks. There is juvenile acne on her face. What type of obesity is it?

- A. Alimentary constitutive obesity

- B. Hypothalamic obesity
- C. Adrenal obesity
- D. Hypothalamic syndrome of puberty
- E. Hypothyroid obesity

30. An 8-year-old girl complains of frequent painful urination in small amounts and urinary incontinence. The signs have been present for 2 days already. She explains her disease by overexposure to colostomy. Costovertebral angle tenderness is absent. Complete blood count is without pathologies. Urine test: leukocytes - 20-30 in the vision field, erythrocytes - 40-50 in the vision field, unchanged, bacteriuria. What is the most likely diagnosis?

- A. Cystitis
- B. Vulvitis
- C. Pyelonephritis
- D. Glomerulonephritis
- E. Urolithiasis

31. A 2.5-year-old child is ill for the second day. The onset of the disease was associated with the temperature up to 37.8°C, a single bout of vomiting, and watery diarrhea up to 5 times per day. During the second day, vomiting occurred twice, body temperature is 38.0°C, the child has low appetite, watery diarrhea continues. The treatment of the child should start with the following:

- A. Prescribe loperamide
- B. Prescribe nifuroxazide
- C. Prescribe oral rehydration
- D. Prescribe ceftriaxone
- E. Prescribe polymyxin

32. A 10-year-old boy came to the polyclinic with complaints of stuffy nose. It is known that these signs occur in the child periodically (in spring and autumn). He has a history of atopic dermatitis. The father of the child has bronchial asthma. Objectively, the boy's face is pale and slightly swollen. Respirations are 22/min. Auscultation detects vesicular respiration over the lungs. Rhinoscopy shows swollen and pale nasal mucosa. What disease can be suspected?

- A. Recurrent respiratory disease
- B. Allergic rhinitis
- C. Acute rhinitis
- D. Acute maxillary sinusitis
- E. Acute adenoiditis

33. During regular examination of a 2-year-old boy, he presents with enlarged left kidney, painless on palpation. The right kidney was undetectable on palpation. Excretory urography shows no contrast on the right. Cystoscopy detected hemi atrophy of the urinary bladder trigone, the right ureteral orifice is not detected. What pathology is it?

- A. Agenesis of the right kidney
- B. Agenesis of the right ureter
- C. Hypoplasia of the right kidney
- D. Ectopic right ureteral orifice
- E. Dystopia of the right kidney

34. A 6-year-old girl complains of body temperature up to 39°C, rhinitis, dry cough, dyspnea. She has been presenting with these signs for 5 days already. On examination her

condition is of moderate severity. Her dyspnea is of mixed genesis. Respirations are 28/min., pulse is 120/min. Percussion produces a dull sound in the right lower segments; in the same area auscultation detects weakened respiration and fine vesicular wet crackles; coarse respiration can be detected on the left. Make the provisional diagnosis:

- A. Acute bronchiolitis
- B. Right-sided community-acquired pneumonia
- C. Stenosing laryngotracheitis
- D. Acute simple bronchitis
- E. Acute obstructive bronchitis

35. A 12-year-old girl after a case of respiratory infection developed dyspnea at rest, paleness of skin. Heart rate is 110/min., BP is 90/55 mm Hg. Heart sounds are muffled. Borders of relative heart dullness: right - the parasternal line, upper - the III rib, left - 1,0 cm outwards from the midclavicular line. Make the provisional diagnosis:

- A. Somatoform autonomic dysfunction
- B. Infectious myocarditis
- C. Hypertrophic cardiomyopathy
- D. Functional cardiopathy
- E. Exudative pericarditis

36. An 18-year-old patient complains of skin rash. The patient has been suffering from this condition for 5 years. The first instance of this disease occurred after a car accident. Objectively: the patient presents with a papular rash covered in silvery scales, "thimble" sign (small pits on the nails), affected joints. What is the most likely diagnosis?

- A. Onychomycosis
- B. Lupus erythematosus
- C. Rheumatism
- D. Panaritium
- E. Psoriasis

37. A 17-year-old girl complains of a pain in her knee and ankle joints and body temperature up to 39°C 2 weeks ago she had a case of acute tonsillitis. Objectively, her joints are swollen, sharply painful, and their mobility is reduced. On the skin of her trunk and limbs there are barely visible circle-shaped pale pink spots. Heart rate is 95/min., blood pressure is 90/60 mm Hg, heart sounds are weakened, there is a soft systolic noise over the apex. Make the provisional diagnosis:

- A. Systemic scleroderma
- B. Rheumatoid arthritis
- C. Erythema nodosum
- D. Reactive arthritis
- E. Acute rheumatic fever

38. A patient 1 year ago had a Q wave myocardial infarction of the posterior wall of the left ventricle. For the last 2 weeks he has been suffering from daily attacks of atrial fibrillation and bradycardia episodes, accompanied by bouts of vertigo. What tactic is the most advisable in this case?

- A. Prescription of bisoprolol
- B. Prescription of amiodarone
- C. Prescription of digoxin
- D. Pacemaker implantation

E. Prescription of procainamide

39. A 16-year-old boy developed dizziness. His heart rate is 35/min., blood pressure is 85/45 mm Hg. Heart borders are not enlarged. Heart sounds are loud and clear. ECG shows P waves disconnected from QRS complexes, dissociation and different rhythm of atria and ventricles is accompanied by varying location of P wave in relation to QRST complex. This presentation is the most characteristic of the following disease:

- A. Extrasystole
- B. Sinus bradycardia
- C. Complete atrioventricular block (III degree)
- D. Atrioventricular block (II degree)
- E. Atrio-ventricular dissociation

40. After semolina was introduced into the diet, a 1-year-old child for 2 months has been presenting with loss of appetite, irritability, loss of body mass, and loss of previously learned skills. The feces are copious and foul-smelling. The skin is pale and dry, the hair is brittle. The abdomen is distended, while the limbs are thin. Stool test shows high levels of fatty acids.

What is the most likely diagnosis?

- A. Irritable bowel syndrome
- B. Functional diarrhea
- C. Mucoviscidosis
- D. Celiac disease
- E. Lactase deficiency

41. 17-year-old girl has been suffering from hepatic cirrhosis for 3 years. Lately her periods of excitation have been intermittent with depression, she does not sleep enough. Objectively, her condition is severe, the girl is sluggish, gives one-word responses, has tremor in her extremities, her skin is icteric, with single hemorrhagic rashes. Name the likely complication of her disease:

- A. Sepsis
- B. Kidney failure
- C. Bipolar affective disorder
- D. Hepatic encephalopathy
- E. Reye syndrome

42. During a regular examination, an 8-year-old girl with type I diabetes mellitus presents with a swelling on the anterior surface of her hip. The swelling is 3 cm in diameter, dense, painless on palpation. The skin over this formation has normal color and temperature. Localization of the swelling matches the place where the girl usually receives her insulin injections. What is the most likely cause of this clinical presentation?

- A. Formation of a post-injection abscess
- B. Allergic response
- C. Formation of a post-injection infiltration
- D. Development of atrophic lipodystrophy
- E. Development of hypertrophic lipodystrophy

43. After playing with 'mosaics'; a 2-year-old child suddenly developed cough, stridor respirations, urges to vomit, and cyanosis against the background of relative somatic health. What should the doctor suspect first when examining this child?

- A. Acute obstructive bronchitis

- B. Acute laryngotracheitis
- C. Pneumonia
- D. Foreign body aspiration
- E. Pertussis