

## **Pediatric surgery. Krok 2 tests.**

1. The 10 y.o. boy has complains on headache, weakness, fever 40°C, vomiting, expressed dyspnea, pale skin with flush on right cheek, lag of right hemithorax respiratory movement, dullness on percussion over low lobe of right lung, weakness of vesicular respiration in this zone. The abdomen is painless and soft at palpation. Which disease lead to these symptoms and signs?

**A. Pneumonia croupousa**

B. Intestinal infection

C. Acute appendicitis

D. Acute cholecystitis

E. Flu

2. An 8 y.o. boy complains of constant cough along with discharge of greenish sputum, dyspnea during physical activities. At the age of 1 year and 8 months he fell ill for the first time with bilateral pneumonia that had protracted course. Later on there were recurrences of the disease 5-6 times a year, during the remission periods there was constant productive cough. What examination results will be the most important for making a final diagnosis?

**A. Bronchography**

B. Roentgenography of thorax organs

C. Bacterial inoculation of sputum

D. Bronchoscopy

E. Spirography

3. 10 years ago patient had a fracture in the middle one-third of his left femoral bone, and during the last 7 years he has been having acute inflammation in the area of old fracture accompanied by formation of a fistula through which some pus with small fragments of bone tissue is discharged. After a time the fistula closes. What complication of the fracture is it?

**A. Chronic osteomyelitis**

B. Bone tuberculosis

C. Soft tissue phlegmon

D. False joint

E. Trophic ulcer

4. A 16 year old patient with complaints of frequent pain in the abdomen was diagnosed with melanoma, examination revealed also pigmentation of the mucosa and skin, polyp in the stomach and large intestine. It is know that the patient's mother has an analogous pigmentation and has been often treated for anemia. What disease is suspected?

**A. Peytz-Egers's polyposis**

B. Chron's disease

C. Tuberculosis of the intestine

D. Adolescent polyposis

E. Hirschprung's disease

5. A child was born with body weight 3250 g and body length 52 cm. At the age of 1,5 month the actual weight is sufficient (4350 g), psychophysical development corresponds with the age. The child is breast-fed, occasionally there are regurgitations. What is the cause of regurgitations?

**A. Aerophagia**

B. Pylorostenosis

C. Pylorospasm

D. Acute gastroenteritis

E. Esophageal atresia

6. Preventive examination of an 11 year old boy helped to determine his habitus type. It was established that the child's shoulders were deviated and brought forward, with forward flexion of head, the thorax was flattened, abdomen was convex. The child's backbone had signs of deepened cervical and lumbar curvatures. What habitus is it?

- A. Kyphosis**
- B. Lordosis
- C. Round-shouldered
- D. Corrected
- E. Normal

7. A 4 month old child was admitted to a surgical department 8 hours after the first attack of anxiety. The attacks happen every 10 minutes and last for 2-3 minutes, there was also one-time vomiting. Objectively: the child's condition is grave. Abdomen is soft, palpation reveals a tumour-like formation in the right iliac area. After rectal examination the doctor's finger was stained with blood. What is the most probable diagnosis?

- A. Ileocecal invagination**
- B. Gastrointestinal haemorrhage
- C. Wilm's tumour
- D. Helminthic invasion
- E. Pylorostenosis

8. A patient was delivered to a surgical department after a road accident with a closed trauma of chest and right-sided rib fracture. The patient was diagnosed with right-sided pneumothorax, it is indicated to perform drainage of pleural cavity. Pleural puncture should be made in:

- A. In the 2nd intercostal space along the middle clavicular line**
- B. In the 6th intercostal space along the posterior axillary line
- C. In the 7th intercostal space along the scapular line
- D. In the projection of pleural sinus
- E. In the point of the greatest dullness on percussion

9. Examination of a 3-month-old child revealed scrotum growth on the right. This formation has elastic consistency, its size decreases during sleep and increases when the child is crying. What examination will be helpful for making a correct diagnosis?

- A. Palpation of the thickened cord crossing the pubical tubercle (sign of the silk glove)**
- B. Diaphanoscopy
- C. Palpation of the external inguinal ring
- D. Punction of the scrotum
- E. Examination of the formation in Trendelenburg's position

10. A 4 year old girl was playing with her toys and suddenly she got an attack of cough, dyspnea. Objectively: respiration rate - 45/min, heart rate - 130/min. Percussion revealed dullness of percutory sound on the right in the lower parts. Auscultation revealed diminished breath sounds with bronchial resonance on the right. X-ray picture showed shadowing of the lower part of lungs on the right. Blood analysis revealed no signs of inflammation. The child was diagnosed with foreign body in the right bronchus. What complication caused such clinical presentations?

- A. Atelectasis**
- B. Emphysema
- C. Pneumothorax
- D. Bronchitis
- E. Pneumonia

11. A boy is 1 year old. Previously he had purulent otitis. After that he started complaining about pain in the upper third of his left thigh, body temperature rose up to 39°C. Objectively: the thigh is swollen in its upper third, inguinal fold is smoothed. Extremity is in half-bent position. Active and passive movements are impossible because of acute pain. What is the most probable diagnosis?

**A. Acute haematogenic osteomyelitis**

B. Acute coxitis

C. Intermuscular phlegmon

D. Osteosarcoma

E. Brodie's abscess

12. An infant is full-term. Delivery was pathological, with breech presentation. Examination of the infant revealed limited abduction of the right leg to 50°, positive "clicking" symptom on the right, asymmetric inguinal folds. What is the most probable diagnosis?

**A. Inborn dislocation of the right hip**

B. Inborn dislocation of both hips

C. Varus deformity of both femoral necks

D. Fracture of both femoral necks

E. Right hip dysplasia

13. A full term infant was born after a normal pregnancy, delivery, however, was complicated by marginal placental detachment. At 12 hours of age the child, although appearing to be in good health, passes a bloody meconium stool. For determining the cause of the bleeding, which of the following diagnostic procedures should be performed first?

**A. Barium enema**

B. An Apt test

C. Gastric lavage with normal saline

D. An upper gastrointestinal series

E. Platelet count, prothromb

14. A 9-year-old boy has been suffering from bronchoectasis since he was 3. Exacerbations occur quite often, 3-4 times a year. Conservative therapy results in short periods of remission. The disease is progressing, the child has physical retardation. The child's skin is pale, acrocyanotic, he has "watch glass" nail deformation. Bronchography revealed saccular bronchiectases of the lower lobe of his right lung. What is the further treatment tactics?

**A. Surgical treatment**

B. Further conservative therapy

C. Physiotherapeutic treatment

D. Sanatorium-and-spa treatment

E. Tempering of the child's organism

15. Head circumference of a 1-monthold boy with signs of excitement is 37 cm, prefontanel is 2x2 cm large. After feeding the child regurgitates small portions of milk; stool is normal in its volume and composition. Muscle tone is within norm. What is the most likely diagnosis?

**A. Pylorospasm**

B. Meningitis

C. Pylorostenosis

D. Microcephaly

E. Craniostenosis

16. A 3-year-old male patient consulted a family doctor 2 months after he had been operated for an open fracture of brachial bone. Objectively: the patient's condition is satisfactory, in the region of the operative wound there is a fistula with some purulent discharge, redness, fluctuation. X-ray picture shows brachial bone destruction with sequestra. What complication arose in the postoperative period?

- A. Posttraumatic osteomyelitis**
- B. Hematogenic osteomyelitis
- C. Wound abscess
- D. Posttraumatic phlegmon
- E. Suture sinus

17. A children's surgical unit admitted a 1-month-old boy who had been prenatally diagnosed with the left-sided pyelectasis. Such studies as drip infusion urography, cystography and USI allowed to reveal initial hydronephrosis. There is no information confirming the secondary pyelonephritis. What tactics of this patient management is most advisable?

- A. 6-month surveillance**
- B. Urgent nephrostomy
- C. Anderson-Hynes operation
- D. There is no need in further surveillance and treatment
- E. Antibacterial therapy

18. After an accident a patient complains of pain in the hip joint. Objectively: the leg is in the position of flexion, adduction and internal rotation, significantly contracted. There is elastic resistance to passive adduction or abduction of the extremity. Major trochanter is located high above the Roser-Nelaton line. A significant lordosis is present. What is your provisional diagnosis?

- A. Iliac dislocation of hip**
- B. Femoral neck fracture with a displacement
- C. Cotyloid cavity fracture with a central dislocation of hip
- D. Inferoposterior dislocation of hip
- E. Pertrochanteric fracture of hip

19. A 17-year-old patient complains of pain in the area of the left knee joint. Soft tissues of thigh in the affected region are infiltrated, joint function is limited. X-ray picture of the distal metaepiphysis of the left femur shows a destruction focus with periosteum detachment and Codman's triangle found at the defect border in the bone cortex. X-ray of chest reveals multiple small focal metastases. What treatment is indicated?

- A. Palliative chemotherapy**
- B. Radioiodine therapy
- C. Distance gamma-ray therapy
- D. Disarticulation of the lower extremity
- E. Amputation of the lower extremity

20. Head circumference of a 1-monthold boy with signs of excitement is 37 cm, prefontanel is 2x2 cm large. After feeding the child regurgitates small portions of milk; stool is normal in respect of its volume and composition. Muscle tonus is within norm. What is the most likely diagnosis?

- A. Pylorospasm**
- B. Meningitis
- C. Pylorostenosis
- D. Microcephaly
- E. Craniostenosis

21. A neonatologist examining a fullterm mature baby revealed the shortening and external rotation of the newborn's lower extremity. Clinical examination revealed positive Ortolani sign, symptom of non-vanishing pulse, additional skin folds on the internal surface of thigh. What is the most likely diagnosis?

- A. Congenital hip dislocation**
- B. Dysplasia of the hip joint
- C. Varus deformity of the femoral neck
- D. Femoral neck fracture
- E. Fracture of the femoral shaft

22. A child is being discharged from the surgical department after conservative treatment of invagination. What recommendations should doctor give to mother to prevent this disease recurrence?

- A. Strict following of feeding regimen**
- B. Common cold prophylaxis
- C. Feces observation
- D. Gastro-intestinal disease prevention
- E. Hardening of the child

23. A 2-year-old child in a satisfactory condition periodically presents with moderate proteinuria, microhematuria. USI results: the left kidney is undetectable, the right one is enlarged, there are signs of double pyelocaliceal system. What study is required to specify the diagnosis?

- A. Excretory urography**
- B. Micturating cystography
- C. Retrograde urography
- D. Doppler study of renal vessels
- E. Radioisotope renal scan

24. A 13-year-old boy complains of pain in the upper third of his left thigh, body temperature rise up to 39°C. There is a swelling in the upper third of thigh and inguinal fold smoothness. The extremity is in a half-bent position. Active and passive movements are not possible because of the sharp pain. What is the most likely diagnosis?

- A. Acute hematogenous osteomyelitis**
- B. Acute coxitis
- C. Intermuscular phlegmon
- D. Osteosarcoma
- E. Brodie's disease

25. A 12-year-old child has been hit on the stomach. The patient is in moderately grave condition, has a forced position in bed. The skin is pale, Ps- 122/min. The stress on the left costal arch causes a slight pain. There are positive Weinert, Kulenkampff symptoms. Macroscopically the urine is unchanged. What is the most likely diagnosis?

- A. Spleen rupture, abdominal bleeding**
- B. Left kidney rupture, retroperitoneal hematoma
- C. Rupture of the pancreas
- D. Liver rupture, abdominal bleeding
- E. Rupture of a hollow organ, peritonitis

26. A 15-year-old boy feels pain in the region of the left knee joint. Objectively: the soft tissues in the affected region are infiltrated, the joint function is limited. Radiography reveals a focus of bone destruction in the distal metaepiphyseal segment of the left femur. The destruction is accompanied by periosteal detachment and a defect formed within cortex of Codman triangle bone. X-ray of chest shows multiple microfocal metastases. What is the most likely pathology?

**A. Osteogenic sarcoma**

B. Fibrosarcoma

C. Chondrosarcoma

D. Ewing's sarcoma

E. Juxtacortical sarcoma

27. A 22-day-old infant had developed red subcutaneous nodules from 1,0 to 1,5 cm large on the scalp. Later the nodules suppurated, body temperature rose up to 37, 7°C, there appeared symptoms of intoxication, the regional lymph nodes grew bigger. Blood test results: anemia, leukocytosis, neutrophilia, accelerated ESR. What is the most likely diagnosis?

**A. Pseudofurunculosis**

B. Pemphigus

C. Vesiculopustulosis

D. Scalp phlegmon

E. –

28. A 13-year-old male patient consulted a doctor about pain occurring in the lower third of the thigh with weight bearing activities and unloaded. The patient denies any injuries to the region. Objectively: the skin is of normal color, deep palpation reveals pastosity and tenderness, movements of the knee joint are limited. Radiograph of the distal femoral metaepiphyseal region shows a zone of degradation and spicules. In blood: immature cells are present, there are no signs of inflammation. What is the most likely diagnosis?

**A. Osteosarcoma**

B. Hyperparathyroid dystrophy

C. Chronic osteomyelitis

D. Multiple myeloma

E. Marble bone disease

29. When playing in a kindergarten a 3- year-old child suddenly developed dyspnea, paroxysmal compulsive dry cough. The face is cyanotic, the eyes are tearful. Vomiting occurred several times. Breathing is weakened over the whole right side of the chest. The provisional diagnosis is:

**A. Foreign body**

B. Obstructive bronchitis

C. Bronchial asthma

D. Hysteria fit

E. Stenosing laryngotracheitis

30. A child is 1 month 10 days old. "Gushing" vomiting has been observed since the age of 3 weeks. The vomit volume exceeds the volume of the previous feeding. Objectively: the child is inert. Skin elasticity and tissue turgor are decreased. Hour-glass deformity sign is positive. The preliminary diagnosis is pyloric stenosis. What treatment tactics should be chosen?

**A. Surgery**

B. Prescription of Cerucal (Metoclopramide)

C. Atropinization

D. Internal administration of Novocaine

E. Prescription of Pipolphen

31. After a case of purulent otitis a 1-year-old boy has developed pains in the upper third of the left thigh, body temperature up to 39°C. Objectively: swelling of the thigh in its upper third and smoothed out inguinal fold. The limb is in semiflexed position. Active and passive movements are impossible due to severe pain. What diagnosis is most likely?

**A. Acute hematogenous osteomyelitis**

B. Acute coxitis

C. Intermuscular phlegmon

D. Osteosarcoma

E. Brodie's abscess

32. A 15-year-old man complains of pain in the lower third of his left thigh, which occurs both with and without physical exertion. Possibility of trauma is denied by the patient. Objectively: skin colour is normal; pastosity and pain can be detected with deep palpation; knee joint mobility is reduced. X-ray of distal femoral metaphysis shows an area of destruction and spicule. Blood test: immature cells, no signs of inflammation. The most likely diagnosis is:

**A. Osteogenic sarcoma**

B. Osteitis fibrosa cystica

C. Chronic osteomyelitis

D. Multiple myeloma

E. Marble-bone disease

33. A 3-month-old child presents with saffron-yellow coloring of the skin, sclera, and mucous membranes. The abdomen is enlarged, hepatomegaly and splenomegaly are observed. In blood there is conjugated bilirubin-induced hyperbilirubinemia. On intravenous cholangiocholecystography: opacified bile is discharged into the intestine. Transaminase activity is normal. What is the most likely diagnosis?

**A. Biliary atresia**

B. Physiologic jaundice

C. Hemolytic disease of newborn

D. Crigler-Najjar syndrome

E. Congenital hepatitis

34. A 3-year-old child presents with sharp deterioration of his general condition. He has a history of purulent otitis. His temperature is now 38.5°C. The left leg is pressed to the torso, active movements are absent, the lower third of the thigh and knee joint are thickened, hyperemic, with localized fever. Axial load leads to acute discomfort of the patient. What is the most likely diagnosis?

**A. Epiphyseal osteomyelitis on the left**

B. Left hip fracture

C. Rheumatoid arthritis

D. Osteogenic sarcoma

E. Hygroma of the knee

35. A 6-year-old girl arrived to the in-patient unit with complaints of enlargement of the lower third of her right thigh. According to the case history, she has been stepping carefully on her right leg and limping for 6 months. Blood test detected anemia. X-ray of the right thigh shows a round bone defect with clear margins resembling melting sugar in the distal metaphysis. What provisional diagnosis can be made in this case?

**A. Osteogenic sarcoma of the right femur**

B. Rheumatoid arthritis of the right knee joint

C. Acute hematogenous osteomyelitis of the distal femoral metaphysis on the right

D. Tuberculous osteitis of the distal femoral metaphysis on the right

E. Giant cell tumor of the right femur

36. Examination detected vesicles with seropurulent content on the neck, back of the head, and buttocks of an infant on the 4th day of life. The patient's condition is satisfactory, the child is active, all newborn reflexes can be fully induced, the umbilical cord is at the stage of mummification, the umbilical area is without any peculiarities. What disease can be suspected?

- A. Phlegmon
- B. Epidermolysis bullosa
- C. Miliaria
- D. Neonatal pemphigus
- E. Vesiculopustulosis**

37. 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. Toxic erythema
- C. Vesiculopustulosis
- D. Pseudofurunculosis
- E. Pemphigus syphiliticus

38. A 7-month-old child was hospitalized into the surgical department 8 hours after the onset of the disease. The child has anxiety attacks and occasional vomiting. Objectively, a tumor-like formation is palpable in the abdomen on the right. Rectal examination detects blood in the form of "raspberry jelly". What is the most likely diagnosis in this case?

- A. Intestinal duplication
- B. Enterocystoma
- C. Intussusception**
- D. Tumor of the abdominal cavity
- E. Helminth infestation

39. A 15-year-old boy complains of pain attacks in his abdomen during defecation, diarrhea up to 6 times in 24 hours with pus and dark blood in the feces. Objectively, his physical and sexual development is delayed. The skin is pale and dry. The abdomen is distended and painful in the umbilical region and in the right iliac region. Crohn's disease is suspected. What examination is necessary to confirm the diagnosis?

- A. Colonoscopy**
- B. Abdominal ultrasound
- C. Rectoromanoscopy
- D. Fecal cytology
- E. Fibroesophagogastrroduodenoscopy

40. A 2-month-old baby presents with body weight loss, projectile vomiting after each feeding, and stool retention (once per 48 hours). Examination detects the "hourglass" symptom. Vomitus is foul-smelling and contains no bile. The baby is breastfed. What is the most likely diagnosis in this case?

- A. Intussusception
- B. Intestinal obstruction
- C. Pylorospasm
- D. Habitual regurgitation
- E. Congenital pyloric stenosis**



41. A 7-year old boy after a fall from a height presents with rapid and shallow breathing and cyanotic face. The right half of this thorax is distended and takes no part in the respiration. Percussion detects tympanitis in the affected area, while auscultation detects no breathing there. What pathology is the most likely cause of this clinical presentation? What instrumental examination would be the most informative in this case?

- A. Right-sided hemothorax. Survey X-ray of the chest
- B. Tension cyst of the right lung. Tracheobronchoscopy
- C. Airway foreign body. Diagnostic and therapeutic bronchoscopy
- D. Right-sided tension pneumothorax. Chest X-ray**
- E. Mediastinitis. Survey X-ray of the chest

42. 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 hemiatrophy of the urinary bladder trigone, the right ureteral orifice is not detected. What pathology is it?

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

43. A child was born from the first pregnancy, accompanied by gestosis of its first and second half. The delivery was via caesarean section. Apgar score – 6 points. The baby's weight – 3000 g. The baby was suckling actively, no regurgitation. Two weeks later, the baby developed projectile vomiting with curdled milk in the vomitus that exceeded in volume the amount of baby's meals. The baby has become lethargic, is poorly gaining weight, the amount of urine and feces has decreased. What is the most likely diagnosis in this case?

- A. Intestinal obstruction
- B. Hirschprung's disease
- C. Pylorospasm
- D. Pyloric stenosis**
- E. Adrenogenital syndrome

44. A 2-year old child has abdominal distension and constipations. According to the patient's medical history, these symptoms first appeared at the age of nine months. Irrigography detects a narrowed area in the distal segments of the large intestine with a funnel-like transition into a suprastenotic expansion. What is the most likely diagnosis in this case?

- A. Crohn's disease
- B. Hirschprung's disease**
- C. Meckel's diverticulum
- D. Dolichosigma
- E. Intestinal duplication

45. A three-year old boy has been suffering from stool retention since birth. Every 3-4 days the mother gives her child enemas. The boy lags behind his peers in physical development. Objectively, he has pale skin and distended abdomen. What disease can be suspected in this child?

- A. Intestinal tumor
- B. Coprostasis
- C. Helminthiasis
- D. Peritonitis
- E. Hirschprung's disease**

46. A 15-year-old patient presents with delayed physical development and periodically develops icteric skin. Objectively, the spleen is 16x12x10 cm, cholecystolithiasis is observed in the patient, there is a skin ulcer on the left calf in its lower third. In the blood: erythrocytes -  $3.0 \cdot 10^{12}/L$ , Hb - 90 g/L, color index - 1.0, microspherocytosis, reticulocytosis. Total serum bilirubin - 56  $\mu\text{mol}/L$ , indirect bilirubin - 38  $\mu\text{mol}/L$ . What treatment method would be optimal in this case?

- A. Omentohepatopexy
- B. Spleen transplant
- C. Portocaval anastomosis
- D. Splenectomy**
- E. Omentosplenopexy

47. A 3-year-old child, while playing, suddenly developed cough attacks and problems with breathing. Objectively, the child has a dry cough and mixed type dyspnea. Auscultation detects a small amount of dry crackles in the lungs. Respiration is weakened on the right. The child does not attend kindergarden and has all necessary immunizations for that age. What pathology can be suspected?

- A. Bronchial asthma
- B. Acute respiratory viral infection
- C. Pertussis
- D. Airway foreign body**
- E. Pneumonia

48. On day 3 of life, a newborn presented with a deformation, edema, and hematoma of soft tissues in the left supraclavicular region. The arm is pressed to the torso, passive movements are accompanied by fussiness of the child. What is the likely diagnosis in this case?

- A. Phlegmon of the newborn
- B. Displaced fracture of the left clavicle**
- C. Osteomyelitis of the left clavicle
- D. Non-displaced subperiosteal fracture of the left clavicle
- E. Erb's palsy