

Screening questions for the final exam in Pediatrics

Faculty of Medicine Simmelweis University Pediatrics Center 2023/24

- 1) Imaging modality of choice when evaluating a child for infantile hypertrophic pyloric stenosis: **ultrasonography.**
- 2) Typical age of intussusception in infants: **3 months - 3 years.**
- 3) What are the two typical anamnestic features of acute appendicitis? **First epigastric and periumbilical pain, later the pain is localized in the right lower abdominal quadrant.**
- 4) Standard imaging modality of polytraumatized patients: **acute CT.**
- 5) Most common cause of acute abdomen in children: **appendicitis.**
- 6) Which is the most common cause of strangulation ileus? **Incarcerated hernia.**
- 7) The most common cause of transfusion-requiring hematochezia, without abdominal pain and without diarrhea: **Meckel's diverticulum.**
- 8) You find a high GGT in a patient with ulcerative colitis, what should you think about? **Sclerosing cholangitis.**
- 9) What are the typical characteristics of perianal fissures in Crohn's disease? **Not in the midline, deep, not painful.**
- 10) What is the first therapeutic choice in Crohn's disease? **Exclusive enteral nutrition.**
- 11) What are the two most frequent chest deformities? **Pectus excavatum and pectus carinatum.**
- 12) What are typical signs of bacterial otitis externa? **Pain and/or tenderness of the tragus.**
- 13) What are the 4 most important indications of adenoidectomy? **Recurrent infections of the upper respiratory tract, recurrent otitis media, inhibition of nasal breathing, obstructive sleep apnea.**
- 14) The most frequent pathogen of sinusitis and otitis media? **Str. pneumoniae.**
- 15) In which cases of middle-ear inflammatory disease should we suggest tympanostomy tubes (Grommet)? **Chronic serous otitis media and/or chronic dysfunction of the Eustachian tube.**
- 16) What is the most frequent pathogen in urinary tract infections? **E. coli.**
- 17) What are the typical abnormalities in urine analysis in glomerulonephritis? **Red blood cells and red blood cell cylinders. Proteinuria can also appear.**
- 18) What is the most frequent cause of hypertension before the adolescent age? **Kidney disease.**
- 19) Which is the most frequent glomerulonephritis type? **IgA nephropathy.**
- 20) What is the prognosis of West-syndrome or infantile spasm? **Usually poor.**
- 21) Which bacterium is the most frequent cause of childhood pneumonia? **Str. pneumoniae.**
- 22) What are the two main components of the treatment of pseudocroup? **Rectal steroid, inhalation of adrenaline.**

- 23) What is the most common cause of new onset cough? **Viral infection.**
- 24) What is the Holzknecht sign characteristic for? **Airway foreign body aspiration.**
- 25) What is the most common cause of a cough ongoing since birth which always presents during feeding? **Tracheoesophageal fistula.**
- 26) What percentage of the mortality is caused by accidents in Hungary in children older than 1 year? **36-40%, this is the main cause of death in children older than 1 year.**
- 27) What is the prognosis of juvenile absence epilepsy? **Usually favorable.**
- 28) What can prevent coronary artery disease (aneurysm) in Kawasaki syndrome? **IVIG.**
- 29) What is the most serious complication of juvenile idiopathic arthritis? **Macrophage activation syndrome (MAS).**
- 30) Which muscles are affected in juvenile polymyositis? **Proximal muscles of the limbs.**
- 31) What is the typical feature of stool in biliary atresia? **Clay-colored (acholic) stool.**
- 32) What kind of diseases are included in 'atopic march' and in which order? **Atopic dermatitis food allergy - asthma bronchiale - allergic rhinitis.**
- 33) How is food allergy diagnosed? What is the reliability of IgE testing? **IgE testing is not reliable. The diagnosis should be based on double blind oral food challenge.**
- 34) In which case serological testing is not informative in celiac disease. **In IgA deficiency.**
- 35) What is the diagnostic basis of endocarditis? **Blood culture and echocardiography.**
- 36) What are the upper airway infections that should be treated with antibiotics? **Streptococcus angina, acute otitis media and acute bacterial sinusitis.**
- 37) What is the diagnostic basis of erythema migrans? **The fact of tick bite and the clinical picture: growing erythema which is more than 5 cm in diameter.**
- 38) What is the ideal age for closing the soft palate defect? **Between 9 and 18 months.**
- 39) What is the most likely diagnosis in the following case: patient with polyuria, polydipsia with positive urine glucose and acetone test? **Diabetes mellitus.**
- 40) A patient with typical diabetes symptoms has a 18.2 mmol/l blood sugar level in the afternoon. What is to be done? **Refer the child to a pediatric diabetic center immediately.**
- 41) What kind of hormonal changes are seen in the salt wasting form of congenital adrenal hyperplasia due to deficiency of 21-hydroxylase? **Insufficient glucocorticoid and mineralocorticoid secretion, excessive androgen secretion.**
- 42) How does the mother's iodine deficiency influence the newborn's thyroid function? **It results in temporary primary hypothyroidism.**
- 43) Which is the most common adrenocortical enzyme defect? **The defect of the 21-hydroxylase enzyme.**
- 44) What are the most typical histologic findings in ulcerative colitis? **Crypt abscesses.**
- 45) Name at least 5 extraintestinal abnormalities in celiac disease: **hepatitis, osteoporosis, arthritis, isolated iron deficiency, Duhring-disease (dermatitis herpetiformis).**

- 46) What is the definition of “graft versus leukemia”? **Immunologic attack of the donor cells against the patient's leukaemic cells after allogeneic bone marrow transplantation.**
- 47) What is a haploidentical transplant? **Half matched HLA antigen stem cell transplant (from usually a family member).**
- 48) What does allogeneic stem cell transplant mean? **The patient (recipient) gets hematopoietic stem cells from another person (donor).**
- 49) What glucose levels are diagnostic for diabetes mellitus? **Fasting blood glucose level higher than 7 mmol/l, or more than 11.1 mmol/l at any time or at any point during an oral glucose tolerance test (OGTT).**
- 50) Which are the 4 presenting symptoms of diabetes mellitus? **Polyuria, polydipsia, weight loss with good appetite, fatigue-weakness.**
- 51) What are the diseases most commonly associated with type 1 diabetes mellitus? **Celiac disease and Hashimoto thyroiditis.**
- 52) What is the most modern therapeutic method of type-one diabetes? **Insulin pump with an integrated glucose sensor.**
- 53) How much insulin should be given in diabetic ketoacidosis? **0.05-0.1 U/kg/h.**
- 54) Since the introduction of expanded screening, how many congenital metabolic diseases are screened routinely in Hungary? **27 and SMA screening is also available.**
- 55) The final therapy of biliary atresia is liver transplantation. There is a surgical bridging therapy before transplantation. What is the name of this operation? **Kasai porto-enterostomy.**
- 56) How often should a baby be breastfed? **On-demand.**
- 57) When is it suggested to introduce cow's milk for children? **After 12 months of age.**
- 58) How does the breast milk's protein content relate to the cow's milk protein content? **One third.**
- 59) What are the most important diseases which can be easily diagnosed and followed up by cranial ultrasound? **Brain hemorrhage and hydrocephalus.**
- 60) For how long can we see the shadow of the thymus on the thoracic X-ray? **Until 3 years of age.**
- 61) What radiological examinations can be done to diagnose VUR? (Name three!). **MCU (Micturating cystourethrogram), Sono-cystography, Dynamic kidney-scintigraphy.**
- 62) How can you diagnose perforation in a critically ill baby with necrotizing enterocolitis if you cannot move them in the incubator? **Horizontal X-ray from side position while the baby is lying on the back.**
- 63) In which part of the bone does osteomyelitis start? **In the metaphysis.**
- 64) How long to wait after surgery before bathing? **7-8 days.**
- 65) What is chicken pox (varicella) reactivation called? **Herpes zoster.**
- 66) What is the sixth disease? **Exanthema subitum, roseola infantum.**
- 67) Which is the contagious disease that causes severe fetal injuries in 80 percent of its cases? **Rubella.**

- 68) Name at least five examples when pulse oximetry is not informative! **Carbon-dioxide intoxication, methemoglobinemia, severe anemia, cardiac failure, cold extremities.**
- 69) Define paradoxical breathing! **The chest moves inward and the abdomen moves outward during inhalation, and vice versa.**
- 70) How do we give oxygen to a conscious patient in an emergency situation who is breathing spontaneously? **Through a face mask with a reservoir, with high flow oxygen (10-15 l/min).**
- 71) How does the concentration of protein and glucose of CSF change in bacterial meningitis? **Protein concentration is increased, glucose concentration is decreased.**
- 72) Name of the two most common pathogens of newborn meningitis! **Streptococcus agalactiae, E. coli.**
- 73) What affects the sensitivity of blood culture? **The amount of blood drawn within 24 hours after the fever.**
- 74) Name the condition of infants associated with abdominal pain in which bowel movements are preceded by tension and crying lasting for about 10 minutes? **Infantile dyschezia**
- 75) The pathogen causing neonatal infection that can be identified by maternal vaginal secretion screening. **Streptococcus agalactiae (group B Streptococcus, GBS).**
- 76) The amount of a single fluid bolus required to treat septic shock: **10 ml/kg.**
- 77) The most common endocrine disorder causing growth retardation: **Thyroid dysfunction – hypothyroidism.**
- 78) What does precocious puberty mean in the case of girls? **If the secondary sexual characteristics appears before the age of 8 years.**
- 79) What changes can we see in the urine sediment in typical pyelonephritis? **Leukocytes and bacteria.**
- 80) In which chromosomal abnormality is duodenal atresia common? **Trisomy 21 (Down syndrome).**
- 81) What is the radiological sign of duodenal atresia? **„Double-bubble” sign.**
- 82) What are the B-symptoms in lymphoma? **Fever, night sweats, weight loss.**
- 83) At what platelet count is there major risk of bleeding? **Below 10-20 G/l.**
- 84) What to do in case of neutropenic fever? **Broad spectrum empiric antibiotic therapy after taking blood cultures.**
- 85) What are the serum electrolyte disturbances in case of tumor lysis syndrome? **Elevated potassium, phosphate and uric acid, decreased calcium.**
- 86) What are the alarming signs of retinoblastoma? What examinations are required? **Strabism, leukocoria - ophthalmoscopic examination.**
- 87) What is the most common type of malignancy in childhood? **ALL.**
- 88) What are the symptoms of increased intracranial pressure? **Headache, vomiting in the morning, nuchal rigidity, setting-sun sign, focal neurological signs, bradycardia, high blood pressure, irritability, bulging fontanelle.**
- 89) What are the physical symptoms of anemia? **Fatigue, paleness, tachycardia, systolic heart murmurs.**

- 90) How does the total iron binding capacity change in case of anemia and inflammation? **Increased in anemia, decreased in inflammation.**
- 91) What is the treatment of immune thrombocytopenia (first- and second-line treatment.)? **IVIg, corticosteroid.**
- 92) List the signs of increased work of breathing! **Use of respiratory accessory muscles, intercostal retraction, jugular retraction, nasal flaring, paradoxical breathing, grunting.**
- 93) At what age do the fontanelles close at the latest? **Posterior fontanelle: by 3 months, anterior fontanelle: by 18 months.**
- 94) What are the symptoms and laboratory signs of nephrotic syndrome? **Proteinuria, hypoalbuminemia, hyperlipidemia, oedema.**
- 95) What are the symptoms and laboratory signs of nephritic syndrome? **Hematuria, oedema hypertension, uraemia, oliguria (kidney failure is correct instead of the latter two).**
- 96) What factors are included in the APGAR score? **Heart rate, respiratory rate, skin color, reflex irritability, muscle tone.**
- 97) Age limits of puberty? **Boys: 9-14 years. Girls: 8-13 years.**
- 98) What are the direct and indirect signs of appendicitis? **Direct sign: tenderness at the McBurney point. Indirect signs: Blumberg, Rovsing, Obturator, Psoas signs.**
- 99) How can we estimate the body weight between the ages of 2-8 years? **(2 x years) + 8.**
- 100) What does autologous stem cell transplantation mean? **A procedure in which a patient's healthy stem cells are collected from the blood or bone marrow before high dose chemotherapy, stored, and then given back to the patient after treatment.**
- 101) What is the heart rate and respiratory rate of a healthy newborn? **Respiratory rate: 50-60/min, Heart rate: 120-160/min.**
- 102) Which cultured pathogen from throat swabs warrants antibiotic treatment? **Str. pyogenes.**
- 103) In case of maternal GBS positivity, up to what age can this bacteria cause disease in the baby? **Up to six months of age.**
- 104) What is the recommended empiric treatment of neonates with suspected sepsis? **Ampicillin + Gentamycin.**
- 105) What factors are included in the croup score? **Sound of inhalation, stridor, cough, signs of dyspnea (nasal flaring, retractions), cyanosis.**
- 106) In case of pain localized to one point in the bone, when should we order an X-ray if the pain does not stop? **1 week.**
- 107) What is the choice of imaging modality if acute osteomyelitis is suspected? **MRI.**
- 108) What is the most common presentation of cow's milk protein allergy in infants? **Bloody stool.**
- 109) Which disease should be suspected in case of bloody stool and vomiting in neonates? **Volvulus.**
- 110) Which disease should be suspected in case of neonates with distended abdomen and severe constipation? **Hirschsprung-disease**