MINISTRY OF HEALTH OF BELARUS

GRODNO STATE MEDICAL UNIVERSITY

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PEDIATRICS

Multiple choice questions for students of the «General medical practice» subinternship with the English language of instruction

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The multiple choice questions for students of the «General medical practice» subinternship with the English language of instruction, medical residents and interns to control their knowledge.

CONTENTS

ACUTE RESPIRATORY DISEASES IN CHILDREN

1. Respiratory failure is the inability of the respiratory system:
1. to deliver adequate oxygen to the tissues causes hypoxia
2. failure to excrete carbon dioxide results in hypercapnia
3. all listed above

2. Laboratory criteria for acute respiratory failure are:
1. Hypoxemia: PaO_2<60 mmHg; SaO_2 <90%; PaO_2/FiO_2 ratio<300
2. Hypoxemia: PaO_2>60 mmHg; SaO_2 <100%; PaO_2/FiO_2 ratio<300
3. Hypercapnia: pCO_2>55; pCO_2>50 with acidosis (pH<7.25)
4. Hypercapnia: pCO_2<55; pCO_2<50 with acidosis (pH<7.25)

3. All patients with acute respiratory failure require intubation and mechanical ventilation:
1. true
2. false

4. Acute respiratory distress syndrome or acute lung injury typically are associated with severe hypoxemia and defined by:
1. PaO_2:FiO_2 ratios of <200 or <300, respectively
2. PaO_2:FiO_2 ratios of <500 or <400, respectively

5. Chronic respiratory failure:
1. develops gradually over time and requires long-term treatment
2. occurs suddenly and requires long-term treatment
3. requires home oxygen or ventilator support

6. Acute respiratory failure is:
1. a short-term condition
2. occurs suddenly
3. typically treated as a medical emergency

7. Chronic respiratory failure describes chronic respiratory processes which induce:
1. chronically low oxygen levels (baseline SaO2 < 88% on room air)

2. chronically low oxygen levels (baseline SaO2 < 98% on room air)
3. chronically high carbon dioxide levels (pCO2 > 50 often with a normal pH)
4. chronically high carbon dioxide levels (pCO2 <50 often with a normal pH)

8. Respiratory failure is broadly classified into two categories (type 1 and type 2) according to the pCO_2 level:
1. normocapnic
2. hypercapnic
3. hypocapnic

9. Signs of increased work of breathing are:
1. nasal flaring
2. retractions, abdominal breathing
3. grunting
4. tachypnea

10. Upper airway obstruction tends to cause:
1. stridor
2. inspiratory dyspnea
3. wheezing
4. prolonged expiratory phase
5. expiratory dyspnea

11. Lower airway obstruction tends to cause:
1. stridor
2. inspiratory dyspnea
3. wheezing
4. prolonged expiratory phase
5. expiratory dyspnea

12. Which parameters of arterial blood gas are normal:
1. pO_2 of 80-100 mmHg
2. pO_2 of 60-80 mmHg
3. SaO_2 of 95-100%
4. SaO_2 of 90-98%

13. Which parameters of arterial blood gas are normal?

1. pCO_2 of 35-45 mmHg
2. CO_2 of 55-65 mmHg
3. pH of 7.25-7.35
4. pH of 7.35-7.45

14. The normal PaO_2/FiO_2 ratio (estimates the oxygenation) is:

1. 100-200
2. 300-400
3. 500-600

15. Which FiO_2 is when breathing room air?

1. 21%
2. 60%
3. 100%

16. Select airway diseases which cause respiratory emergencies (respiratory failure):

1. bronchitis
2. croup
3. epiglottitis
4. pneumonia
5. bronchiolitis

17. Select lung tissue diseases which cause respiratory emergencies (respiratory failure):

1. pneumothorax
2. musculoskeletal disorders
3. ARDS
4. pneumonia

18. Select non-respiratory causes which lead to respiratory emergencies (respiratory failure):

1. CNS depression
2. musculoskeletal disorders
3. ARDS
4. epiglottitis
5. thoracic disorders or injuries

19. Metabolic diseases can cause respiratory failure:

1. true
2. false

20. Which diseases can cause respiratory failure due to metabolic disorders:

1. diabetic ketoacidosis
2. lactase deficiency
3. acute kidney injury
4. cystic fibrosis

ACUTE AND CHRONIC HEART FAILURE IN CHILDREN. HEART RHYTHM DISORDERS

1. Heart failure, depending on the rate of development of symptoms divided by:
1. acute HF
2. subacute HF
3. chronic HF
4. recurrent HF

2. Acute heart failure is characterized by:
1. life-threatening condition
2. rapid onset symptoms of HF
3. requiring hospitalisation
4. long-term condition

3. Left-sided heart failure is generally associated with signs of:
1. pulmonary venous congestion
2. systemic venous congestion

4. Right-sided heart failure is generally associated with signs of:
1. pulmonary venous congestion
2. systemic venous congestion

5. Congestive heart failure with normal cardiac output is classified as:
1. compensated
2. uncompensated

6. Congestive heart failure with inadequate cardiac output is classified as:
1. compensated
2. uncompensated

7. Left ventricular failure can be divided into:
1. compensated, uncompensated
2. systolic, diastolic dysfunction
3. acute, subacute

8. HF in children can be divided into two groups according causes:
1. over-circulation failure, pump failure
2. systolic, diastolic dysfunction
3. compensated, uncompensated

9. Causes of over circulation heart failure:
1. ventricular septal defects
2. tricuspid regurgitation
3. anemia
4. aortic stenosis

10. Causes of over circulation heart failure:
1. atrial septal defects
2. transposition of great arteries
3. coarctation of aorta
4. viral myocarditis

11. Causes of pump heart failure:
1. cardiomyopathies
2. patent ductus arteriosus
3. complete heart block
4. toxic lesions

12. Select symptoms of right-sided heart failure:
1. hepatosplenomegaly
2. ascites
3. decreased urine output
4. pulmonary edema

13. Select symptoms of right-sided heart failure:
1. edema (puffiness of the eyes or feet)
2. pleural effusions
3. cardiac asthma
4. bradypnea

14. Select symptoms of left-sided heart failure:
1. hepatosplenomegaly

2. nasal flaring or grunting
3. recurrent wheezing
4. tachypnea

15. Select symptoms of left-sided heart failure:
1. tachypnea
2. respiratory distress
3. cyanosis
4. diaphoresis during feedings
5. ascites and/or pleural effusions

16. Which classification of heart failure for children is used?
1. NYHA classification
2. ACC/AHA classification
3. Ross classification
4. ARF classification
5. Jones criteria

17. Class I (Ross classification):
1. asymptomatic
2. mild tachypnea or diaphoresis with feeding in infants, dyspnea on exertion in older children
3. marked tachypnea or diaphoresis with feeding in infants, marked dyspnea on exertion, prolonged feeding times with growth failure
4. symptoms such as tachypnea, retractions, grunting, or diaphoresis at rest

18. Class II (Ross classification):
1. symptoms such as tachypnea, retractions, grunting, or diaphoresis at rest
2. mild tachypnea or diaphoresis with feeding in infants, dyspnea on exertion in older children
3. marked tachypnea or diaphoresis with feeding in infants, marked dyspnea on exertion, prolonged feeding times with growth failure
4. asymptomatic

19. Class III (Ross classification):

1. asymptomatic
2. mild tachypnea or diaphoresis with feeding in infants, dyspnea on exertion in older children
3. marked tachypnea or diaphoresis with feeding in infants, marked dyspnea on exertion, prolonged feeding times with growth failure
4. symptoms such as tachypnea, retractions, grunting, or diaphoresis at rest

20. Class IV (Ross classification):

1. asymptomatic
2. mild tachypnea or diaphoresis with feeding in infants, dyspnea on exertion in older children
3. symptoms such as tachypnea, retractions, grunting, or diaphoresis at rest
4. marked tachypnea or diaphoresis with feeding in infants, marked dyspnea on exertion, prolonged feeding times with growth failure

21. Class I (NYHA classification):

1. no limitations of physical activity
2. symptoms with minimal exertion that interfere with normal daily activity
3. may experience fatigue, palpitations, dyspnea, or angina during moderate exercise but not during rest
4. unable to carry out any physical activity because they typically have symptoms of HF at rest that worsen with any exertion

22. Class II (NYHA classification):

1. no limitations of physical activity
2. symptoms with minimal exertion that interfere with normal daily activity
3. may experience fatigue, palpitations, dyspnea, or angina during moderate exercise but not during rest
4. unable to carry out any physical activity because they typically have symptoms of HF at rest that worsen with any exertion

23. Class III (NYHA classification):
1. no limitations of physical activity
2. symptoms with minimal exertion that interfere with normal daily activity
3. may experience fatigue, palpitations, dyspnea, or angina during moderate exercise but not during rest
4. unable to carry out any physical activity because they typically have symptoms of HF at rest that worsen with any exertion

24. Class IV (NYHA classification):
1. no limitations of physical activity
2. symptoms with minimal exertion that interfere with normal daily activity
3. unable to carry out any physical activity because they typically have symptoms of HF at rest that worsen with any exertion
4. may experience fatigue, palpitations, dyspnea, or angina during moderate exercise but not during rest

25. Select basic investigations in patients with suspected heart failure:
1. chest radiography
2. electrocardiography
3. echocardiography
4. metabolic and genetic testing
5. endomyocardial biopsy

26. Select special investigations in patients with heart failure:
1. cardiac magnetic resonance imaging
2. electrocardiography
3. polymerase chain reaction
4. metabolic and genetic testing
5. endomyocardial biopsy

27. Drugs used in pediatric heart failure:
1. furosemide
2. digoxin
3. metopropol
4. bicillin-5

5. metronidazole

28. Furosemide is given intravenously at a dose of:
1. 0,1-0,2 mg/kg
2. 1-2 mg/kg
3. 10-20 mg/kg

29. Device therapy in heart failure includes:
1. cardiac resynchronization therapy
2. extracorporeal membrane oxygenation
3. pacemaker therapy
4. cardiac magnetic resonance imaging
5. endomyocardial biopsy

30. Cardiomegaly on pediatric chest radiography is suggested by a cardiothoracic ratio of:
1. >60% in neonates
2. >55% in neonates
3. >55% in older children
4. >50% in older children

CONVULSIONS AND SEIZURES IN CHILDREN. FEVER IN CHILDREN

1. Fever has traditionally been defined as:
   1. rectal temperature over 38
   2. oral temperature over 37,5
   3. rectal temperature over 39
   4. axillary temperature over 38.5
   5. axillary temperature over 37

2. Rectal temperature of 38.5°C or greater is:
   1. not likely to be related to bundling
   2. likely to be related to bundling

3. There are two more accurate ways to measure a child's temperature:
   1. rectal temperature
   2. axillary temperature
   3. oral temperature
   4. forehead temperature

4. Significance of fever depends on clinical context rather than peak temperature:
   1. true
   2. false

5. Fever is:
   1. a normal response to infection
   2. a pathological response to infection
   3. life-threatening condition if >41.0°C when measured rectally
   4. associated with rheumatic disease
   5. associated with malignancy

6. Cytokines associated with fever (endogenous pyrogens) are:
   1. IL-1; IL-6
   2. TGF-beta, IL-10
   3. TNF-alpha, IFN-gamma
   4. IL-1; IL-10

7. List types of fever:
   1. acute
   2. acute prolonged or subacute
   3. acute recurrent or periodic
   4. chronic or unknown origin
   5. all above are correct

8. The most common perinatal bacterial pathogens in neonates are:
   1. group B streptococci
   2. Escherichia coli
   3. Listeria monocytogenes
   4. Hemophilus influenza

9. The following findings of febrile patient are of particular concern:
   1. age<1 mo
   2. lethargy or high-pitched persistent cry
   3. respiratory distress
   4. petechiae or purpura
   5. recurrent vomiting
   6. all listed above

10. All children with chronic fever should have:
   1. blood and urine culture
   2. Chest X-ray
   3. HIV serology
   4. TB skin test
   5. bone marrow examination

11. When does fever need administration of antipyretics (children more than 2 months age):
   1. rectal temperature 39.5
   2. rectal temperature 37.5
   3. axillary temperature 38.5
   4. axillary temperature 37.5

12. Antipyretic drugs which that are typically used:

1. acetaminophen
2. ibuprofen
3. diclofenac
4. acetylsalicylic acid

13. The dosage of Acetaminophen is:
1. 10 to 15 mg/kg PO, 5-10 mg/kg rectally
2. 10 to 15 mg/kg PO, IV, or rectally
3. 10 to 15 mg/kg PO or 15 to 20 mg/kg IV
4. maximal daily dose 60 mg/kg
5. maximal daily dose 80 mg/kg

14. The dosage of Ibuprofen is:
1. 5-10 mg/kg PO
2. 5-10 mg/kg PO or IV
3. maximal daily dose 40 mg/kg
4. maximal daily dose 60 mg/kg

15. What is true?
1. use of one antipyretic at a time is preferred
2. giving combinations of acetaminophen and ibuprofen is recommended
3. giving combinations of acetaminophen and ibuprofen increases the chance of wrong
4. dose of one or the other of the medications
5. giving alternating acetaminophen and ibuprofen is not recommended routinely

16. Status epilepticus is:
1. a life threatening condition
2. when two or more seizures occur sequentially without return to consciousness between seizures
3. lasts more than 10-15 min
4. lasts more than 20-30 min

17. The following statements are true:
1. most seizures are brief, meaning less than five minutes in duration
2. seizures longer than five minutes are considered prolonged

3. seizures longer than five minutes is status epilepticus

18. The following statements are true:
1. most seizures in children are provoked by disorders originating outside the brain
2. less than one third of seizures in children are caused by epilepsy
3. more than 50% of seizures in children are caused by epilepsy

19. Which of listed can cause seizures?
1. infections, toxins
2. fever
3. head trauma
4. hypoxia and cardiac arrhythmias
5. hypoglycaemia

20. The following statements about seizures are true:
1. stabilization phase (0-5 min) - general measures, looking for causes
2. stabilization phase (0-1 min) - diazepam, looking for causes
3. stabilization phase (0-5 min) - diazepam, looking for causes

21. The following statements about seizures are true:
1. initial therapy phase (5-20 min) – diazepam or midazolam
2. initial therapy phase (1-5 min) – diazepam or midazolam

22. The following statements are true:
1. established convulsive status epilepticus (15-30 min) - a long-acting antiepilepticus drugs in combination with diazepam
2. established convulsive status epilepticus (20-40 min) - intubation and ventilatory support; a long-acting antiepilepticus drugs

ACUTE RENAL INJURY AND CHRONIC KIDNEY DISEASE

1. Which classification of acute kidney failure for children is used?
1. AKIN criteria
2. p-RIFLE
3. c-RIFLE
4. Acute Renal Failure Classification (ARF classification)

2. Which of the following are stages of acute kidney injury?
1. Risk
2. Injury, Failure
3. Loss
4. End-stage kidney disease
5. All listed above

3. The diagnosis of AKI is based on (choose 1 answer)
1. increases in serum creatinine
2. decreases in urine output
3. increases in serum creatinine or decreases in urine output

4. How should assess kidney function if eCCl change less than 25% to prior value?
1. no AKI
2. pRIFLE-R
3. pRIFLE-I
4. pRIFLE-F

5. How should assess kidney function if eCCl change 25-49% to prior value?
1. no AKI
2. pRIFLE-I
3. pRIFLE-F
4. pRIFLE-R

6. How should assess kidney function if eCCl less 50-74% to prior value?
1. pRIFLE-I
2. pRIFLE-F

3. pRIFLE-R
4. pRIFLE-L

7. How should assess kidney function if eCCl decreased greater than or equal to 75% to prior value?
1. pRIFLE-F
2. pRIFLE-R
3. pRIFLE-L
4. pRIFLE-E

8. How should assess kidney function if eCCl below 35 ml/min/1.73m^2?
1. pRIFLE-R
2. pRIFLE-L
3. pRIFLE-E
4. pRIFLE-F

9. How long is required to diagnose AKI with the pRIFLE urine output-based criteria?
1. at least 3 hours
2. at least 8 hours
3. 6 hours
4. at least 12 hours

10. What hour urine output is considered to be "normal"?
1. greater than 1 ml/kg/hour
2. greater than 0.5 ml/kg/hour
3. greater than 3 ml/kg/hour

11. pRIFLE-R stage is diagnosed if urine output:
1. less than 0.5 ml/kg/hour for 8 hours
2. less than 0.5 ml/kg/hour for 16 hours
3. less than 0.3 ml/kg/hour for 24 hours
4. anuric for 12 hours

12. pRIFLE- I stage is diagnosed if urine output:
1. less than 0.5 ml/kg/hour for 8 hours
2. less than 0.5 ml/kg/hour for 16 hours
3. less than 0.3 ml/kg/hour for 24 hours

4. anuric for 12 hours

13. pRIFLE- F stage is diagnosed if urine output:
1. less than 0.5 ml/kg/hour for 16 hours
2. less than 0.3 ml/kg/hour for 24 hours
3. anuric for 12 hours

14. When Loss-stage of AKI according pRIFLE have to be diagnosed?
1. persistent renal failure >4 wk
2. persistent renal failure >3 mo
3. persistent renal failure >2 wk
4. persistent renal failure >6 mo

15. When End-stage of AKI according pRIFLE have to be diagnosed?
1. persistent renal failure >3 mo
2. persistent renal failure >2 wk
3. persistent renal failure >6 mo
4. persistent renal failure >4 wk

16. Select causes of pre-renal acute kidney injury
1. dehydration
2. hemolytic-uremic syndrome
3. cardiac failure
4. severe vesico-ureteral reflux
5. glomerulonephritis
6. posterior urethral valves

17. Select causes of intrinsic renal acute kidney injury
1. dehydration
2. hemolytic-uremic syndrome
3. cardiac failure
4. severe vesico-ureteral reflux
5. glomerulonephritis
6. posterior urethral valves

18. Select causes of post-renal acute kidney injury
1. dehydration

2. hemolytic-uremic syndrome
3. cardiac failure
4. severe vesico-ureteral reflux
5. glomerulonephritis
6. posterior urethral valves

19. Modern biomarkers of acute kidney injury are:
1. cystatin
2. IL-12
3. NGAL
4. CIS

20. Criteria for definition of chronic kidney disease:
1. GFR <60 mL/min/1.73 m2 for ≥3 mo
2. GFR <60 mL/min/1.73 m2 for ≥6 mo
3. kidney damage (abnormalities in imaging tests or kidney biopsy or composition of the blood, urine) for ≥3 mo
4. kidney damage (abnormalities in imaging tests or kidney biopsy or composition of the blood, urine) for ≥6 mo

21. How many stages of chronic kidney disease do you know?
1. 5
2. 3
3. 4
4. 6

22. GFR 30-59 mL/min/1.73 m^2 corresponds to
1. 1 stage - Kidney damage with normal or increased GFR
2. 2 stage - Kidney damage with mild decrease in GFR
3. 3 stage - Moderate decrease in GFR
4. 4 stage - Severe decrease in GFR
5. 5stage - Kidney failure or end-stage renal disease

23. GFR >90 mL/min/1.73 m^2 corresponds to
1. 1 stage - Kidney damage with normal or increased GFR
2. 2 stage - Kidney damage with mild decrease in GFR
3. 3 stage - Moderate decrease in GFR
4. 4 stage - Severe decrease in GFR
5. 5stage - Kidney failure or end-stage renal disease

24. GFR <15 mL/min/1.73 m^2 or on dialysis corresponds to
1. 1 stage - Kidney damage with normal or increased GFR
2. 2 stage - Kidney damage with mild decrease in GFR
3. 3 stage - Moderate decrease in GFR
4. 4 stage - Severe decrease in GFR
5. 5stage - Kidney failure or end-stage renal disease

25. GFR 60-89 mL/min/1.73 m^2 corresponds to
1. 1 stage - Kidney damage with normal or increased GFR
2. 2 stage - Kidney damage with mild decrease in GFR
3. 3 stage - Moderate decrease in GFR
4. 4 stage - Severe decrease in GFR
5. 5stage - Kidney failure or end-stage renal disease

26. GFR 15-29 mL/min/1.73 m^2 corresponds to
1. 1 stage - Kidney damage with normal or increased GFR
2. 2 stage - Kidney damage with mild decrease in GFR
3. 3 stage - Moderate decrease in GFR
4. 4 stage - Severe decrease in GFR
5. 5stage - Kidney failure or end-stage renal disease

27. Laboratory findings of chronic kidney disease
1. hyperkalemia
2. metabolic acidosis
3. metabolic alkalosis
4. hypocalcemia
5. anemia

28. Physical findings of chronic kidney disease
1. short stature, osteodystrophy
2. hypertension
3. nervous system abnormalities
4. anorexia, nausea, vomiting

29. Volume resuscitation in hypovolemic patients (absence of hypoproteinemia) with acute kidney injury means..
1. using isotonic saline, 20 mL/kg over 30 min
2. using hypertonic saline, 20 mL/kg over 30 min

3. using colloid containing solutions 20 mL/kg over 30 min

30. Voiding within 2 hr after volume resuscitation in hypovolemic patients exclude..
1. intrinsic renal acute kidney injury
2. post-renal acute kidney injury
3. pre-renal acute kidney injury
4. acute kidney injury

NEPHROTIC SYNDROME IN CHILDREN

1. Most causes of proteinuria can be categorized into 3 groups:
1. tubular
2. overflow (due to multiple myeloma, myoglobinuria etc.)
3. glomerular
4. interstitial

2. What is a mechanism of overflow proteinuria?
1. large amounts of filtered proteins overwhelm the tubular reabsorptive capacity
2. tubular reabsorptive capacity is impaired
3. increased permeability of the glomerular capillary wall

3. What is a mechanism of glomerular proteinuria?
1. large amounts of filtered proteins overwhelm the tubular reabsorptive capacity
2. tubular reabsorptive capacity is impaired
3. increased permeability of the glomerular capillary wall

4. What is a mechanism of tubular proteinuria?
1. large amounts of filtered proteins overwhelm the tubular reabsorptive capacity
2. tubular reabsorptive capacity is impaired
3. increased permeability of the glomerular capillary wall

5. Select causes of overflow proteinuria?
1. multiple myeloma
2. Fanconi syndrome
3. focal segmental glomerulosclerosis
4. interstitial nephritis
5. myoglobinuria (rhabdomyolysis, or hemolysis)

6. Select causes of tubular proteinuria?
1. multiple myeloma
2. Fanconi syndrome
3. focal segmental glomerulosclerosis
4. minimal change disease
5. interstitial nephritis

7. Select causes of glomerular proteinuria?
1. membranous nephropathy
2. Fanconi syndrome
3. focal segmental glomerulosclerosis
4. minimal change disease
5. interstitial nephritis

8. Urinary protein excretion in the normal child is:
1. less than 100 mg/m^2/day or a total of 150 mg/day
2. less than 1 g/m^2/day
3. less than 10 mg/m^2/day

9. Normal protein excretion in children is defined as:
1. ≤4 mg/m^2/hour
2. 4-40 mg/m^2/ hour
3. >40 mg/m^2/ hour

10. Abnormal protein excretion in children is defined as:
1. ≤4 mg/m^2/hr
2. 4-40 mg/m^2/hr
3. >40 mg/m^2/hr

11. Normal urine protein-to-creatinine ratio (UPCR) in children is:
1. less than 2
2. greater than 1
3. less than 0.5

12. Transient proteinuria is associated with:
1. fever
2. seizure activity
3. exercise
4. congestive heart failure

13. Nephrotic-range proteinuria is defined as proteinuria:
1. >2.5-3.0g /24hr or >50 mg/kg/day
2. urine protein : creatinine ratio >2
3. 40 mg/m^2/hour (in a 24 hours urine collection)

4. all listed above

14. Select obligatory findings of the nephrotic syndrome:
1. hypoalbuminemia (≤2.5 g/dL), edema
2. hypertension
3. hyperlipidemia
4. nephrotic-range proteinuria
5. all listed above

15. Which is the commonest cause of the nephrotic syndrome in preschool age children:
1. minimal change nephrotic syndrome
2. focal segmental glomerulosclerosis
3. membranous nephropathy
4. membranoproliferative glomerulonephritis

16. Which is the commonest cause of the nephrotic syndrome in school age children:
1. minimal change nephrotic syndrome
2. focal segmental glomerulosclerosis
3. membranous nephropathy
4. membranoproliferative glomerulonephritis

17. A renal biopsy is not routinely performed if the patient fits the standard clinical picture of minimal change nephrotic syndrome:
1. false
2. true

18. Which features make minimal change nephrotic syndrome less likely:
1. gross hematuria
2. hypertension
3. hypocomplementemia
4. age <1 yr or >12 yr

19. What is correct for preschool age children with presumed minimal change nephrotic syndrome:
1. should be considered for renal biopsy before treatment

2. should be started treatment with steroids at once
3. should be started supportive, symptomatic treatment

20. What a daily dose of prednisone or prednisolone should be administered for patients diagnosed with minimal change nephrotic syndrome:

1. 20-40 mg/m^2/day or 0.5-1.0 mg/kg/day
2. 60 mg/m^2/day or 2 mg/kg/day
3. 80 mg/m^2/day or 2,5 mg/kg/day

21. Alternative therapies to corticosteroids in the treatment of nephrotic syndrome are following:

1. calcineurin inhibitors (cyclosporine or tacrolimus)
2. cyclophosphamide
3. mycophenolate
4. rituximab
5. all listed above

HEMORRHAGIC SYNDROME. DIFFERENTIAL DIAGNOSIS

1. The main components of the hemostatic process are:
1. vessel wall
2. platelets
3. coagulation proteins
4. anticoagulant proteins
5. fibrinolytic system
6. all listed above

2. Hemostasis is divided into the following components:
1. primary hemostasis
2. secondary hemostasis
3. fibrinolysis

3. Primary hemostasis is characterized by:
1. vasodilation
2. vasoconstriction
3. platelet adhesion and aggregation
4. formation of a platelet plug

4. Secondary hemostasis is characterized by:
1. formation of fibrin
2. platelet adhesion and aggregation
3. formation of a platelet plug

5. The coagulation cascade is classically divided into:
1. intrinsic pathway
2. extrinsic pathway
3. common pathway

6. The intrinsic pathway involves the contact activation factors:
1. factor VIII, IX, XI, XII, high molecular weight kininogen and prekallikrein
2. tissue factor and factor VII
3. factor X, V, II, I (fibrinogen)

7. The extrinsic pathway involves:

1. factor XII, XI, IX, VIII
2. tissue factor and factor VII
3. factor X, V, II, I

8. The common pathway involves:
1. factor XII, XI, IX, VIII
2. factor VII, and tissue factor
3. factor X, V, II, I

9. Select proteins which work as anticoagulants in the clotting process:
1. antithrombin III
2. protein C
3. protein S
4. tissue factor pathway inhibitor
5. all listed above

10. Petechiae is:
1. small, distinct pinpoint hemorrhages less than 2-4 mm in diameter
2. large, diffuse areas, usually black and blue in color
3. hemorrhages up to 1 cm

11. Petechial hemorrhages are typical for:
1. hemophilia A
2. hemophilia C
3. immune thrombocytopenia
4. Osler-Weber-Rendu syndrome

12. Hematoma, ecchymosis is:
1. pinpoint hemorrhages less than 2-4 mm in diameter
2. large, diffuse areas, usually black and blue in color
3. hemorrhages up to 1 cm

13. Hematoma, ecchymosis are specific for:
1. hemophilia A
2. Henoch-Schonlein purpura
3. immune thrombocytopenia
4. Osler-Weber-Rendu syndrome

14. Purpura is:
1. large, diffuse areas, usually black and blue in color
2. pinpoint hemorrhages less than 2-4 mm in diameter
3. pinpoint hemorrhages 4-10 mm in diameter

15. Purpuras are specific for:
1. hemophilia A
2. Henoch-Schonlein purpura
3. immune thrombocytopenia
4. Osler-Weber-Rendu syndrome

16. Reference interval of activated partial thromboplastin time:
1. less 24 seconds
2. 24-35 seconds
3. more 50 seconds

17. Activated partial thromboplastin time characterizes:
1. the intrinsic and common pathway of coagulation cascade
2. the extrinsic pathway of coagulation cascade
3. function of platelets and their interaction with the vascular wall

18. Reference interval of prothrombin time and INR (international normalized ratio):
1. 6-10 seconds and 1.2-1.8
2. 12-15 seconds and 0.8-1.2
3. 17-20 seconds and 0.5-0.8

19. Prothrombin time characterizes:
1. the intrinsic pathway of coagulation cascade
2. the extrinsic and common pathway of coagulation cascade
3. function of platelets and their interaction with the vascular wall

20. The normal platelet count for children ranges:
1. 100-320*10^(9)/l
2. 150-450*10^(9)/l
3. 180-550*10^(9)/l

21. The risk of bleeding is highly increased if:

1. platelet count is less 120 *10^(9)/l
2. platelet count is less 40-50*10^(9)/l
3. platelet count is less 70*10^(9)/l
4. platelet count is less 100*10^(9)/l

22. Spontaneous bleeding usually occur if the platelet count is:
1. less 20*10^(9)/l
2. less 50*10^(9)/l
3. less 70*10^(9)/l
4. less 100*10^(9)/l

23. Bleeding time characterizes:
1. the intrinsic pathway of coagulation cascade
2. the extrinsic and common pathway of coagulation cascade
3. function of platelets and their interaction with the vascular wall

24. According to the pathogenesis disorders of hemostasis are classified into:
1. vasopathy
2. platelet disorder
3. erythrocyte disorder
4. coagulopathy

25. Disorders of primary hemostasis are divided into:
1. vessel wall disorders
2. thrombocytopathies
3. thrombocytopenias
4. coagulopathy

26. Henoch-Schönlein purpura is characterized by:
1. palpable purpura
2. arthralgias
3. abdominal pain
4. hematuria
5. all listed above

27. The skin lesions in Henoch-Schönlein purpura are characterized by:
1. asymmetric lesions

2. symmetric lesions
3. occur in gravity-dependent areas or on pressure points

28. Gastrointestinal manifestations in Henoch-Schönlein purpura are characterized by:
1. abdominal pain
2. vomiting
3. diarrhea
4. microscopic hematuria
5. arthralgias

29. Musculoskeletal manifestations in Henoch-Schönlein purpura are characterized by:
1. painful joints (knees, ankles)
2. vomiting
3. swelling and reduced range of movement in joints
4. microscopic hematuria
5. intracerebral hemorrhage

30. Renal manifestations in Henoch-Schönlein purpura are characterized by:
1. frank nephritis, nephrotic syndrome
2. vomiting
3. microscopic hematuria, proteinuria
4. intracerebral hemorrhage

31. Neurologic manifestations in Henoch-Schönlein purpura are characterized by:
1. headache
2. seizures
3. behavior changes
4. microscopic hematuria, proteinuria
5. intracerebral hemorrhage

32. Thrombocytopenia is a platelet count less than (one answer):
1. 30*10^(9)/l
2. 50*10^(9)/l
3. 70*10^(9)/l

4. 150*10^(9)/l

33. Immune thrombocytopenia (ITP) is classified into:
1. newly diagnosed ITP
2. persistent ITP
3. chronic ITP
4. recurrent ITP
5. all listed above

34. Newly diagnosed immune thrombocytopenia:
1. lasting less than 3 months following diagnosis
2. present 12 or more months from diagnosis
3. lasting more than 3 months following diagnosis
4. defined as return of thrombocytopenia/symptoms after at least 3 mo of remission, sustained without treatment

35. Persistent immune thrombocytopenia is diagnosed if:
1. lasting less than 3 months following diagnosis
2. present 12 or more months from diagnosis
3. lasting more than 3 months following diagnosis
4. defined as return of thrombocytopenia/symptoms after at least 3 mo of remission, sustained without treatment

36. Chronic immune thrombocytopenia:
1. lasting less than 3 months following diagnosis
2. present 12 or more months from diagnosis
3. lasting more than 3 months following diagnosis
4. defined as return of thrombocytopenia/symptoms after at least 3 mo of remission, sustained without treatment

37. Recurrent immune thrombocytopenia:
1. lasting less than 3 months following diagnosis
2. present 12 or more months from diagnosis
3. lasting more than 3 months following diagnosis
4. defined as return of thrombocytopenia/symptoms after at least 3 mo of remission, sustained without treatment

38. Select features of immune thrombocytopenia in children:
1. symmetric rash

2. asymmetric rash
3. flat and not palpable petechiae
4. palpable purpura
5. spontaneous
6. ecchymoses

39. Preferable first-line treatment of immune thrombocytopenia:
1. antibiotics
2. intravenous immunoglobulin
3. intravenous anti-D therapy
4. corticosteroids

40. Traditional dose of intravenous immunoglobulins:
1. 0,1-0,5 g/kg
2. 0,8-1 g/kg
3. 3-4 g/kg

41. Hemophilia A:
1. factor VII deficiency
2. factor VIII deficiency
3. factor IX deficiency
4. factor X deficiency
5. factor XI deficiency

42. Hemophilia B:
1. factor VII deficiency
2. factor VIII deficiency
3. factor IX deficiency
4. factor X deficiency
5. factor XI deficiency

43. Hemophilia C:
1. factor VII deficiency
2. factor VIII deficiency
3. factor IX deficiency
4. factor X deficiency
5. factor XI deficiency

LEUKEMIA IN CHILDREN

1. Which leukemia is most common in childhood (one answer)?
1. acute lymphoblastic leukemia
2. acute myelogenous leukemia
3. chronic myelogenous leukemia

2. Select clinical syndromes which are specific for leukemia:
1. hyperplastic
2. hemorrhagic
3. anemic
4. intoxication
5. all listed above

3. The number of blasts in peripheral blood in healthy children:
1. up to 5%
2. 5-10%
3. more30%
4. not detected

4. Which of the following are correct for acute leukemia:
1. abscence of immature forms of white blood cells, present blasts and mature cells
2. amount of blast cells in bone marrow more30%
3. fast-progressing anemia
4. amount of blast cells in bone marrow less30%

5. Which of the following are correct for chronic leukemia:
1. presence of immature forms of white blood cells (promyelocytes and myelocytes)
2. amount of blast cells in bone marrow less30%
3. basophilic-eosinophilic association
4. amount of blast cells in bone marrow more30%

6. The bone marrow is obtained in newborns by (one answer):
1. tibia epiphysis puncture
2. calcaneus puncture
3. posterior superior ilium crest puncture
4. sternum puncture

7. The bone marrow is obtained in children under 1 year of age by (one answer):

1. tibia epiphysis puncture
2. calcaneus puncture
3. posterior superior ilium crest puncture
4. sternum puncture

8. The bone marrow is obtained in adolescence children by:

1. tibia epiphysis puncture
2. calcaneus puncture
3. posterior superior ilium crest puncture
4. sternum puncture

9. Normal range of blast cells in bone marrow:

1. 0-5% blasts
2. 10-15% blasts
3. 30-40% blasts

10. Hyperplastic syndrome include:

1. lymphadenopathy
2. splenomegaly
3. hepatomegaly
4. bone or joint pain
5. superior vena cava syndrome
6. disseminated intravascular coagulation

ABDOMINAL PAIN SYNDROME. DIFFERENTIAL DIAGNOSIS

1. Select a physiological features of the oral cavity in term-neonate
1. buccae of Bitchat
2. salivary glands produce a lot of saliva
3. procheilon, transversal folds on the lips
4. the tongue completely fills the oral cavity
5. the mouth cavity is big
6. “geographic” tongue

2. What is the stomach volume in 1 mo old child?
1. 10 ml
2. 100ml
3. 250
4. 500

3. How is swallowing of excessive amount of air while taking food called?
1. aspiration
2. regurgitation
3. aerophagia
4. rumination

4. How is the presence of excess fat in feces is called?
1. creatorrhea
2. steatorrhea
3. amilorrhea

5. Select types of peptic ulcers
1. gastric
2. duodenal
3. intestinal
4. primary
5. secondary

6. How many primary teeth have a 3-yrs old child got?
1. 10
2. 18

3. 20
4. 25

7. Select correct statements for primary peptic ulcers
1. it is chronic disease
2. more often in children is duodenal ulcers
3. associated with H. pylori infection
4. more often in children is gastric ulcers
5. it is result of NSAIDs using or stress
6. synonymous is peptic ulcer disease

8. Select correct statements for secondary peptic ulcers
1. usually an acute process
2. it is chronic
3. associated with H. pylori infection
4. more often in children is gastric ulcers
5. it is result of NSAIDs using or stress
6. more often in children is duodenal ulcers

9. Select protective factors for gastric and duodenal mucosa
1. prostaglandin secretion
2. adequate perfusion of the gastric wall
3. acid and pepsin secretion
4. epithelial regeneration capacity
5. mucus and bicarbonate secretion
6. gastrin secretion
7. H. pylori infection

10. Select aggressive factors for gastric and duodenal mucosa
1. prostaglandin secretion
2. acid and pepsin secretion
3. gastrin secretion
4. mucus and bicarbonate secretion
5. H. pylori infection
6. oxidative stress
7. bile refluxes

11. Abdominal pain in children with peptic ulcer disease is characterized by

1. dull pain or intermittent abdominal discomfort
2. nocturnal pain
3. acute burning abdominal pain
4. poorly localized abdominal pain
5. typically occurring several hours after a meal or in an empty stomach, often being relieved by eating
6. accompanied by bloating, nausea and vomiting

12. Which method is used to confirm peptic ulcer disease? (one answer)

1. esophagogastroduodenoscopy
2. abdominal ultrasound
3. abdominal X-ray
4. CT scan
5. blood tests

13. Which complication is the most common in peptic ulcer disease? (one answer)

1. bleeding
2. perforation
3. penetration
4. pyloroduodenic stenosis

14. Which tests are preferred to control H. pylori eradication?

1. urea breath test
2. serology testing
3. culture
4. histology
5. rapid urease test
6. stool antigen test

15. Which of these drugs are proton pump inhibitors?

1. omeprazole
2. metronidazole
3. lansoprazole
4. rabeprazole

16. Which of following is included for quadruple therapy additionally to triple scheme?

1. bismuth salts
2. vancomycine
3. famotidine

17. First-line treatment of H. pylori infection is
1. PPI-furazolidone- metronidazole
2. Bismuth salts-PPI- metronidazole- tetracycline
3. PPI-clarithromycin-amoxicillin

18. Which of the following symptoms are “red flags” for functional gastrointestinal dysfunction:
1. weight loss
2. bloating
3. bleeding
4. anaemia
5. progressive dysphagia or odynophagia
6. nausea

19. Select the histamine H2-receptor antagonists
1. cimetidine
2. famotidine
3. ranitidine
4. omeprazole
5. metronidazole

20. Which gastritis type according by etiology-based classification do you know?
1. H. pylori-induced
2. chemically induced gastritis (drugs) / reactive gastritis (duodenal refluxes)
3. autoimmune gastritis
4. special forms of gastritis (eosinophilic, lymphocytic, granulomatouse, associated with systemic diseases)
5. erosive gastritis

21. Worldwide the most common cause of chronic gastritis is
1. infection with H. pylori
2. drug-induced

3. autoimmune gastritis

22. Secondary ulcers are usually associated with
1. stress
2. sepsis
3. severe trauma, burns
4. drug therapy (steroids and NSAIDs)

23. Gastritis is a histological term exclusively which refers to different type of gastric inflammation?
1. true
2. false

24. How painful swallowing is termed?
1. Odynophagia
2. Rumination
3. Dysphagia
4. Tenesmus
5. Heatburn

25. Functional dyspepsia is characterized by one or more of the following symptoms that are unexplained after a routine clinical evaluation
1. postprandial fullness
2. early satiation
3. epigastric pain / burning
4. vomiting
5. diarrhea

26. Secondary dyspepsia is term which used to describe symptoms of dyspepsia caused by organic or metabolic diseases like
1. peptic ulcer disease
2. pancreaticobiliary disease
3. endocrine disorders
4. medication use
5. all listed above

27. A 10-year old girl has a 3-month history of intermittent burning epigastric pain that is made worse by fasting and improves with meals. She has no other symptoms. Parents were giving her ibuprofen 3 times a day for 1 week when she had a cold. Physical examination discloses only mild epigastric tenderness to palpation, vital signs are normal. Which of following diagnostic study should be done first?

1. abdominal ultrasonography
2. serologic testing for H.pylory
3. esophagogastroduodenoscopy
4. upper gastrointestinal barium study

28. Helicobacter pylori associated dyspepsia is diagnosed if

1. dyspepsia symptoms disappear after H. pylori eradication
2. revealed H. pylori in patients with dyspepsia
3. excluded gastritis, peptic ulcer disease

29. Functional dyspepsia is classified in next subcategories

1. epigastric pain syndrome
2. postprandial distress syndrome
3. vomiting-pain syndrome

30. First-line therapy for functional dyspepsia includes next drugs

1. proton pump inhibitors or H2-receptors antagonists
2. prokinetic drugs (cisapride, domperidone)
3. antidepressants

31. Second-line drugs for functional dyspepsia include (one answer)

1. proton pump inhibitors or H2RAs
2. prokinetic drugs (cisapride, domperidone)
3. antidepressants
4. psychological therapy

32. Select invasive methods of H. pylori diagnosis

1. urea breath test
2. culture
3. histology

4. rapid urease test
5. stool antigen test

33. Select non-invasive methods of H. pylori diagnosis
1. urea breath test
2. culture
3. histology
4. rapid urease test
5. serology testing

34. Serology testing for H. pylori infection is not recommended for clinical use
1. true
2. false

35. Before testing for H. pylori eradication you have to wait
1. at least 2 weeks after stopping PPIs
2. 2 days after stopping PPIs maximum
3. 4 weeks after stopping antibiotics
4. 4 days after stopping antibiotics maximum
5. shouldn’t wait any time

36. Recommended duration of H. pylori eradication therapy is
1. 10-14 days
2. 5-7 days
3. 14-20 days

37. Sydney System for the classification of gastritis combines
1. topographical information
2. morphological information
3. etiological information
4. clinical information

38. There are several categories of gastritis according morphological picture
1. acute
2. chronic
3. special forms
4. subacute

39. Which histological change should be described to confirm chronic inflammation of gastric mucosa (chronic gastritis)?
1. increased lymphocytes and plasma cells in the lamina propria
2. neutrophilic infiltrates in the lamina propria
3. eosinophilic infiltrates in the lamina propria

40. Which histological changes should be described to assess activity of inflammation of gastric mucosa?
1. lymphocytes and plasma cells infiltration in the lamina propria
2. neutrophilic infiltration in the lamina propria

41. What does it mean «chronic active gastritis»?
1. increased lymphocyte cells and neutrophils infiltration in mucosa
2. increased lymphocyte cells infiltration cells in mucosa
3. increased neutrophil cells infiltration in mucosa

42. Which parameters should be described in histological assessment of biopsy specimens from gastric mucosa according to Sydney system?
1. topographical distribution (antrum, fundus, corpus)
2. chronic inflammation grade (low, moderate, severe)
3. activity level (low, moderate, severe, absent)
4. atrophy (present, absent)
5. intestinal metaplasia (present, absent)
6. H.pylori (low, moderate, severe, absent)

43. Grading of chronic inflammation or activity level (as low, moderate or severe) is determined by density of infiltration of the lamina propria with lymphocytes, plasma cells, neutrophils?
1. true
2. false

44. The Sydney classification of gastritis includes
1. histological parameters of activity and chronicity
2. histological parameters of atrophy, intestinal metaplasia
3. topographical distribution
4. etiopathogenic information
5. all listed above

HELMINTHIASIS

1. Soil-transmitted helminthiasis is
1. roundworm (Ascaris lumbricoides)
2. whipworm (Trichus trichiura)
3. hookworms (Necator americanus and Ancylostoma duodenale)

2. List the main causes of helminthiasis:
1. consumption of contaminated water and soil
2. contact with contaminated feces
3. poor sanitation and hygiene
4. all listed above

3. Select diagnostic tests for helminthiasis
1. slool test
2. blood test
3. tape test
4. colonoscopy

4. Ascariasis is caused
1. Ascaris lumbricoides
2. Enterobius vermicularis
3. Toxocara canis
4. Giardia lamblia

5. Giardiasis is caused
1. Ascaris lumbricoides
2. Enterobius vermicularis
3. Toxocara canis
4. Giardia lamblia

6. Enterobiasis is caused
1. Ascaris lumbricoides
2. Enterobius vermicularis
3. Toxocara canis
4. Giardia lamblia

7. List the features of the clinical manifestation of ascariasis

1. the clinical presentation depends on the intensity of infection and the organs involved
2. the most common clinical problems are from pulmonary disease and obstruction of the intestinal or biliary tract
3. larvae migrating may cause allergic symptoms, fever, urticaria, and granulomatous disease
4. the pulmonary manifestations resemble Loeffler syndrome

7. Löeffler syndrome is characterised by
1. pulmonary infiltrates on X-ray
2. low eosinophil level
3. acute onset of symptoms of mainly cough, dyspnoea and wheeze
4. eosinophilia

8. List the most common complaints of enterobiasis
1. itching
2. restless sleep
3. eosinophilia
4. the pulmonary manifestations resemble Loeffler syndrome

9. The classic presentation of visceral larva migrans (human toxocariasis)
1. fever
2. cough, wheezing
3. hepatomegaly
4. pruritus, eczema, and urticaria
5. all listed above

10. Select diagnostic approach for toxocariasis
1. history of geophagia and exposure to puppies or unrestrained dogs
2. eosinophilia (>20%)
3. hypergammaglobulinemia
4. biopsy confirms the diagnosis

11. The classic presentation of ocular larva migrans (human toxocariasis)
1. fever, cough, wheezing
2. hepatomegaly

3. unilateral visual loss
4. eye pain
5. pruritus, eczema, and urticaria
6. all listed above

12. The diagnosis of ocular larva migrans (human toxocariasis) can be established in patients with:
1. typical clinical findings of a retinal or peripheral pole granuloma or endophthalmitis
2. elevated antibody titers

13. Microscopic examination of sputum with ascariasis reveals
1. early phase of ascariasis
2. late phase of ascariasis

14. PCR feces with ascariasis reveals
1. early phase of ascariasis
2. late phase of ascariasis

15. Ascariasis is treated with
1. albendazole
2. piperazine citrate
3. nifuroxazide
4. mebendazole

16. List the drugs used to treated enterobiasis
1. albendazole
2. nifuroxazide
3. mebendazole
4. pyrantel pamoate

17. List the drugs used to treated toxocariasis
1. albendazole
2. nifuroxazide
3. mebendazole
4. pyrantel pamoate
5. prednisone for ocular larva migrants

PEDIATRIC COMA. DIFFERENTIAL DIAGNOSIS. ACUTE AND CHRONIC ADRENAL INSUFFICIENCY IN CHILDREN

1. Select states of impaired consciousness:
1. alertness
2. confusion
3. lethargy and somnolence
4. obtundation
5. stupor

2. Which of the following statements are true for coma?
1. a deep state of prolonged unconsciousness in which a person cannot be awakened
2. fails to respond normally to painful stimuli, light, or sound
3. the patient is asleep unless stimulated, being accessible to verbal stimulation or touch, but when awake is usually disoriented
4. the patient is inattentive, may not manifest any spontaneous activity or speech

3. As opposed to states of transient unconsciousness such as syncope or concussion, coma must last for at least 1 hours:
1. true
1. false

4. Which of the following statements are true for brain death?:
1. the permanent absence of all brain functions including those of the brainstem
2. brain-dead patients are reversibly comatose and apneic
3. brain-dead patients are irreversibly comatose and apneic with absent brainstem reflexes

5. Which of the following are assessed in pediatric Glasgow coma scale?
1. eyes opening
2. verbal response
3. body response
4. motor response

6. The lowest possible sum in pediatric Glasgow coma scale is:

1. 0 points
2. 1 points
3. 3 points
4. 5 points

7. The highest possible sum in pediatric Glasgow coma scale is:
1. 5
2. 10
3. 15

8. A score of 13-15 for pediatric Glasgow coma scale indicates:
1. mild brain injury
2. moderate brain injury
3. severe brain injury
4. deep coma or death

9. A score of 3 for pediatric Glasgow coma scale indicates:
1. mild brain injury
2. moderate brain injury
3. severe brain injury
4. deep coma or death

10. A score of 3-8 for pediatric Glasgow coma scale indicates:
1. mild brain injury
2. moderate brain injury
3. severe brain injury
4. deep coma or death

11. A score of 9-12 for pediatric Glasgow coma scale indicates:
1. mild brain injury
2. moderate brain injury
3. severe brain injury
4. deep coma or death

12. Adrenal insufficiency is a life-threatening condition caused by an impaired secretion of:
1. glucocorticoid and mineralocorticoid hormones
2. glucocorticoid hormones

3. sex hormones

13. Adrenal insufficiency may result from congenital or acquired disorders of:
1. adrenal cortex
2. pituitary
3. hypothalamus
4. all listed above

14. Select clinical types of adrenal insufficiency:
1. acute / adrenal crisis
2. subacute
3. chronic

15. Depending on the localization of the pathological process adrenal insufficiency can be divided into:
1. primary
2. secondary
3. tertiary

16. The most common cause of congenital primary adrenal insufficiency in children is:
1. congenital adrenal hyperplasia
2. Addison disease
3. Waterhouse-Friderichsen syndrome

17. Several enzymes required for adrenal synthesis of cortisol, but the most prevalent congenital adrenal hyperplasia is:
1. 21-hydroxylase deficiency
2. 11-hydroxylase deficiency
3. 11, 21-hydroxylase deficiency

18. Select forms of congenital adrenal hyperplasia:
1. classic form - manifested in early childhood
2. non-classic form –manifested only in late childhood to early adulthood
3. adult form

19. Classic form of congenital adrenal hyperplasia is subdivided into:
1. salt-losing
2. simple virilising
3. mixed
4. all listed above

20. Newborn screening of congenital adrenal hyperplasia is provided by analyzing of:
1. 11-hydroxylase levels in dried blood
2. 21-hydroxylase levels in dried blood
3. 17-hydroxyprogesterone levels in dried blood

21. Acute adrenal insufficiency must be treated urgently with:
1. parenteral hydrocortisone
2. oral fludrocortisones
3. dexamethasone

SEPSIS. SEPTIC SHOCK

1. Sepsis is a clinical syndrome that complicates:
1. severe trauma
2. severe acute pancreatitis
3. severe infection

2. Sepsis is characterized by:
1. the systemic inflammatory response syndrome
2. immune dysregulation
3. microcirculatory derangements
4. end-organ dysfunction
5. all listed above

3. What does SIRS mean:
1. severe inflammatory response syndrome
2. systemic inflammatory response syndrome
3. severe infectious respiratory syndrome

4. Select SIRS criteria:
1. a rectal temperature > 38.5°C or < 36°C
2. heart rate more than two standard deviations (SD) above the normal, or bradycardia in children older than 1 year of age (< 10th percentile for age)
3. respiratory rate more than two SD above normal (or pCO_2< 32 mmHg)
4. leukocyte count > 12.000 cells/mm^3, < 4.000 cells/mm^3, or > 10% band forms

5. How many SIRS-criteria have to be positive to confirm the diagnose:
1. three or more criteria but one of which must be an abnormal temperature or leukocyte count
2. two or more criteria but one of which must be an abnormal temperature or leukocyte count
3. two or more criteria
4. three or more criteria

6. When is severe sepsis diagnosed? (choose one):
1. sepsis is combined with organ dysfunction
2. sepsis is combined with SIRS
3. sepsis is combined with coma

7. Select signs of organ dysfunction:
1. acute respiratory distress syndrome
2. acute renal failure
3. reduced mental status
4. capillary refill time <3 sec

8. Septic shock is sepsis with fluid refractory hypotension and signs of hypoperfusion:
1. true
2. false

9. Capillary refill time >3 sec., skin - cool, mottled; peripheral pulse – decreased. These signs correspond to:
1. cold shock
2. warm shock

10. Capillary refill time <3 sec., skin - warm; peripheral pulse – bounding. These signs correspond to:
1. cold shock
2. warm shock

11. List risk factors for pediatric sepsis:
1. age < 1 mo
2. serious injury (e.g., major trauma, burns, large surgical incisions)
3. host immunosuppression
4. indwelling vascular catheters
5. all listed above

12. Choose the correct definitions of sepsis:
1. sepsis is the presence of SIRS criteria due to infection
2. sepsis is the presence of SIRS criteria due to trauma
3. sepsis is the presence of infection

4. life-threatening organ dysfunction caused by a dysregulated host response to infection

13. Criteria for cardiovascular dysfunction in a septic child:
1. hypotension resistant to normal regimen of infusion
2. need for vasoactive drug to maintain blood pressure
3. tachycardia / bradycardia
4. capillary refill time <3sec

14. Criteria for respiratory dysfunction in a septic child:
1. X-ray picture: both-sided focal pneumonia
2. need for mechanical ventilation
3. acute respiratory distress syndrome
4. need for > 50% FiO_2 to maintain oxygen saturation ≥ 92%

15. Criteria for renal dysfunction in a septic child:
1. serum creatinine ≥ 2 times upper limit
2. potassium >6 mEq/l
3. oliguria
4. disseminated intravascular coagulopathy

16. Select correct initial stages of sepsis management (hemodynamic stabilization):
1. time 0-5 minutes: vascular access and oxygen therapy
2. time 0-15 minutes: vascular access and oxygen therapy
3. time 5-15 minutes: fluid resuscitation
4. time 15-60 minutes: fluid resuscitation
5. time 15-60 minutes: fluid refractory shock and the need for vasoactive medications

17. What is recommended time to start antibiotic treatment for patients diagnosed with sepsis:
1. antibiotic administration within 1 hour of sepsis recognition
2. antibiotic administration within first 2-3 hours of sepsis recognition
3. antibiotic administration within first 6 hours of sepsis recognition

18. First-line agent to treat patient with cold shock is:

1. epinephrine
2. norepinephrine
3. dopamine

19. First-line agent to treat patient with warm shock is:
1. epinephrine
2. norepinephrine
3. dopamine

20. Second-line agent to treat patient with shock is ..(choose one):
1. dopamine
2. epinephrine
3. norepinephrine
4. corticosteroids

21. Fluid resuscitation rules for children diagnosed with septic shock are following:
1. infuse up to 60 mL/kg of isotonic fluids in the first 60 min of recognition of shock
2. infuse up to 60 mL/kg of 5% dextrose solution in the first 60 min of recognition of shock
3. start with a volume of 20 mL/kg within the first 5min; if there is no improvement administer another bolus of 20 mL/kg of fluid until rich 60 ml/kg/hour
4. start with a volume of 60 mL/kg/hour with an infusion pump

ANSWERS

ACUTE RESPIRATORY DISEASES IN CHILDREN

1 3
2 1,3
3 2
4 1
5 1,3
6 1,2,3
7 1,3
8 1,2
9 1,2,3,4
10 1,2
11 3,4,5
12 1,3
13 1,4
14 3
15 1
16 2,3,5
17 1,3,4
18 1,2,5
19 1
20 1,3

ACUTE AND CHRONIC HEART FAILURE IN CHILDREN. HEART RHYTHM DISORDERS

1 1,3
2 1,2,3
3 1
4 2
5 1
6 2
7 1,2
8 1
9 1,2,3
10 1,2
11 1,3,4
12 1,2,3
13 1,2

14 2,3,4
15 1,2,3,4
16 1,2,3
17 1
18 2
19 3
20 3
21 1
22 2
23 3
24 3
25 1,2,3
26 1,3,4,5
27 1,2,3
28 2
29 1,2,3
30 1,3

CONVULSIONS AND SEIZURES IN CHILDREN. FEVER IN CHILDREN.

1 1,2,5
2 1
3 1,3
4 1
5 1,3,4,5
6 1,3
7 1,3,4
8 1,2,3
9 6
10 1,2,3,4
11 1,3
12 1,2
13 2,4
14 1,3
15 1,3,4,5
16 1,2,4
17 1,2
18 1,2
19 1,2,3,4,5

20 1
21 1
22 2

ACUTE RENAL INJURY AND CHRONIC KIDNEY DISEASE

1 1,2
2 5
3 3
4 1
5 4
6 1
7 1
8 4
9 2
10 1
11 1
12 2
13 2,3
14 1
15 1
16 1,3
17 2,5
18 4,6
19 1,3
20 1,3
21 1
22 3
23 1
24 5
25 2
26 4
27 1,2,4,5
28 1,2,3,4
29 1
30 1,2

NEPHROTIC SYNDROME IN CHILDREN

1 1,2,3
2 1

3 3
4 2
5 1,5
6 2,5
7 1,3,4
8 1
9 1
10 2,3
11 3
12 1,2,3,4
13 4
14 1,3,4
15 1
16 2
17 2
18 1,2,3,4
19 2
20 2
21 5

HEMORRHAGIC SYNDROME. DIFFERENTIAL DIAGNOSIS

1 6
2 1,2,3
3 2,3,4
4 1
5 1,2,3
6 1
7 2
8 3
9 5
10 1
11 3
12 2
13 1,3
14 3
15 2,3
16 2
17 1
18 2

19 2
20 2
21 2
22 1
23 3
24 1,2,4
25 1,2,3
26 5
27 2,3
28 1,2,3
29 1,3
30 1,3
31 1,2,3,5
32 4
33 5
34 1
35 3
36 2
37 4
38 2,3,5,6
39 2
40 2
41 2
42 3
43 5

LEUKEMIA IN CHILDREN

1 1
2 5
3 4
4 1,2,3
5 1,2,3
6 2
7 1
8 3,4
9 1
10 1,2,3,4,5

ABDOMINAL PAIN SYNDROME/ DIFFERENTIAL

DIAGNOSIS

1	1,3,4
2	2
3	3
4	2
5	1,2,4,5
6	3
7	1,2,3,6
8	1,4,5
9	1,2,4,5
10	2,3,5,6,7
11	1,2,5,6
12	1
13	1
14	1,6
15	1,3,4
16	1
17	3
18	1,3,4,5
19	1,2,3
20	1,2,3,4
21	1
22	1,2,3,4
23	1
24	1
25	1,2,3
26	5
27	3
28	1,3
29	1,2
30	1,2
31	3,4
32	2,3,4
33	1,5
34	1
35	1,3
36	1
37	1,2,3
38	1,2,3

39 1
40 2
41 1
42 1,2,3,4,5,6
43 1
44 5

HELMINTHIASIS

1 1,2,3
2 4
3 1,2,3,4
4 1
5 4
6 2
7 1,3,4
8 1,2
9 5
10 1,2,3,4
11 3,4
12 1,2
13 1
14 2
15 1,2,4
16 1,3,4
17 1,3,5

PEDIATRIC COMA. DIFFERENTIAL DIAGNOSIS. ACUTE AND CHRONIC ADRENAL INSUFFICIENCY IN CHILDREN

1 1,2,3,4,5
2 1,2
3 1
4 1,3
5 1,2,4
6 3
7 3
8 1
9 4
10 3
11 1

12 1
13 4
14 1,3
15 1,2,3
16 1
17 1
18 1,2
19 1,2
20 3
21 1

SEPSIS. SEPTIC SHOCK

1 3
2 5
3 2
4 1,2,3,4
5 2
6 1
7 1,2,3
8 1
9 1
10 2
11 5
12 1,4
13 1,2,3
14 2,3,4
15 1,2,3
16 1,3,5
17 1
18 1
19 2
20 1
21 1,3