**Glomerulonephritisin children**Simple complement

1. E
2. C
3. E
4. C
5. A
6. A
7. A
8. C
9. D
10. C
11. C
12. E
13. D
14. A
15. B

***Multiple Complement***

1. A,B,C
2. A,B,E
3. A,C,D,E
4. A,B,C
5. A,B,C
6. A,B,D
7. A,B,D,E
8. A,B,C
9. A,D,E
10. B,C,D,E
11. A,B,E
12. A,B,D
13. A,B,C,E
14. A,B,C,D
15. A,B,C,D
16. B,C,D
17. B,C,E
18. A,B,C,D
19. A,B,C,D
20. A,B,C
21. A,B,C,D
22. A,B,C
23. A,B,C,E
24. A,B,D
25. A,B,C,D
26. A,B,C
27. A,B,C,D
28. B,C,E
29. A,D
30. A,B,C
31. A,B,D,E
32. A,B,C,E
33. A,B,D,E
34. B,C,E

**Glomerulonephritis in children. Simple complement**

*1.Which syndrome is not typical for the onset of acute poststreptococcal glomerulonephritis in children?*a. urinary syndrome
b. hypertensive syndrome
c. edematous syndrome
d. nitrogen retention syndrome
e.heart failure

*2. What is the most common etiologic agent of acute poststreptococcal glomerulonephritis in children?*a.ECHO viruses
b. staphylococcus
c. β-hemolytic streptococcus
d. vaccination
e.food allergies

*3.Which paraclinical signs attest an unfavorable evolution of glomerulonephritis in children?*
a.leukocyturia
b. proteinuria
c. macroscopic haematuria
d. frequentcasts

e.nonselective proteinuria

*4. Which type of injury results in significant proteinuria?*

a. lesions of endothelium
b. at the level of basal membranes
c. at the level of subepithelial membranes
d. at the level of epithelial cells
e.at the mesangium level

*5.Choose what is not included in the treatement of acute poststreptococcal glomerulonephritis in children:*a.corticosteroids
b. hypoallergenic diet

c. antibacterial therapy
d. antiplatelet drug *(*antiaggregant*)*e.diuretics

*6.What is the pathogenic treatment of pediatric idiopathic nephrotic syndrome ?*
a. prednisolone
b. diuretics
c. antihypertensives
d. antibiotics
e.antiaggregants

*7.What is the most common mechanism of glomerular lesions in chronic glomerulonephritis in children?*a. immune
b. metabolic
c. hemodynamic
d. toxic
e.infectious

*8. What morphological variant corresponds to rapidly progressive acute glomerulonephritis?*a. glomerulonephritis with minimal glomerular changes
b. mesangioproliferative glomerulonephritis
c. crescentic extracapillary glomerulonephritis
d. proliferative glomerulonephritis, membranoproliferative glomerulonephritis
e. diffuse sclerosing glomerulonephritis

*9. What manifestation is not characteristic for acute poststreptococcal glomerulonephritis in children?*a. hypertension
b. hematuria
c. moderate edema
d. proteinuria > 3.5 g/ 24h
e.proteinuria < 3.5 g / 24h

*10.What degree of proteinuria is typical for idiopathic nephrotic syndrome in children?*a. up to1 g/ l
b. 1.0-2.0g/ l
c. over3.5g/ l
d. 2.5-3.0g/ l
e. 2.0-2.5g/ l

*11. Which complication is not typical for acute glomerulonephritis in children?*a. pulmonary edema
b. heart failure
c. nephrosclerosis
d. hypertensive encephalopathy
e. hypertension

*12. Pathophysiological lesions in acute poststreptococcal glomerulonephritis in children include all of the following EXCEPT:*

a.deposition of circulating immune complexes in glomeruli
b. local activation of complement
c. the decrease of the glomerular filter
d. increased permeability of the glomerular filter
e.podocyte injury

*13.Choose the feature that is not characteristic for urine analysis in pediatric acute poststreptococcal glomerulonephritis:*
a. hematuria
b. proteinuria
c. cilindruria
d. epithelial cells
e. hypoosmolarity

*14. What amount of proteinuria is typical for acute glomerulonephritis with nephritic syndrome in children?*

a. 0.5-3 g / l
b. > 3.0 g / l
c. is not characteristic
d. > 3.5 g / l
e. up to 0.5 g / l

*15.What syndrome is not characteristic for chronic glomerulonephritis in children?*

a. urinary syndrome
b. febrile syndrome
c. nephritic syndrome
d. nephrotic syndrome
e.hypertensive syndrome

**Multiple complement**

*1. What conditions favor the deposition of circulating immune complexes in kidneys?*a. increased blood flow
b. endothelial surface
c. components ofthe glomerular filter
d. glomerularlesions
e. increased levels ofcomplement fractions

*2.List all proinflammatory substances involved in pathogenesis of glomerular lesions:*a.molecules of cell adhesion
b. reactive oxygen metabolites
c. IgE
d. hyaluronic acid
e.growth factors

*3. Indicate all specific characteristics of edema in renal diseases:*a. white
b. harsh
c. fluffy
d. localization in lax rich subcutaneoustissue
e. massive

*4.What are the complications of glomerulonephritis in children ?*a. pulmonary edema
b. tracheobronchitis
c. pneumonia
d. bronchial asthma
e. pulmonary infarction

*5.What investigations can prove the Streptococcal infection ?*a. increased titer of antistreptolysin O

b. Increased hyaluronidase
c. positive throat cultures
d. urinalysis
e.bioptic renal puncture

*6.Choose the prognostic criteria of acute poststreptococal glomerulonephritis in children:*a. pulmonary edema
b. hypertensive encephalopathy
c. oliguria more than 50 ml/kg/ day
d. creatinine clearance under the 60 ml/m2
e. blood urea under 49 mg/ dl

*7. Enumerate the differential diagnosis of acute postreptococcal glomerulonephritis in children:*

a. Alport syndrome

b. IgA Nephropathy

c. glomerulonephritis with minimal changes

d. rapidly progressive glomerulonephritis

e.focal segmental glomerulonephritis

*8. Indicate the morphological forms of idiopathic nephrotic syndrome in children:*

a. glomerular lesions absent or minimal
b. diffuse mesangial proliferation
c. focal glomerulosclerosis
d. endocapillary glomerulonephritis
e. membranoproliferative glomerulonephritis

*9. What is characteristic for pure nephrotic syndrome in children?*a. minimal or absent glomerularlesions
b. persistent microscopic haematuria
c. persistent macroscopic haematuria
d. selective proteinuria
e.good response to corticotherapy

*10. The onset of atypical acute glomerulonephritis in children includes all of following:*
a. urinary syndrome
b. heart failure
c. acute renal failure
d. rough hypertension
e. glomerulonephritis with minimal urinary syndrome

*11. What are the characteristics of urinalysis in pediatric nephrotic syndrome ?*a. increase potassium elimination
b. decrease of sodium elimination
c. absence of hyalinecasts
d. absence ofgranularcasts
e. lipiduria

*12. Dyselectrolytemia in nephrotic syndrome in children is characterized by the following:*a. hyponatremia
b. hypokalemia
c. hypophosphatemia
d. normal values ofpotassium level
e. hypernatremia

*13. What are the complications of corticosteroid therapy in nephrotic syndrome in children?*a. physical retardation
b. psychosis
c. sleep disorder
d. hypotension
e. secondary infections

*14.What are the indications for kidney biopsy in children?*a. proteinuria and hematuria of unknown etiology
b. hypertension of unknown aetiology
c. steroid-rezistent nephrotic syndrome
d. suspected amyloidosis
e. renal tuberculosis

*15.What are the compulsory investigations in acute glomerulonephritis in children?*a. creatinine

b. complete blood count
c. urinalysis
d. kidney ultrasound
e.kidney biopsy

*16. What are the mechanisms involved in the development of edema in kidney diseases ?*

a. hypertension
b. reduction of colloid-osmotic pressure
c. increase of glomerular basement membrane permeability
d. increase oftubular reabsorption of sodium
e. hypervolaemia

*17.Choose the biochemical characteristics of idiopathic nephrotic syndrome in children:*

a. low serum complement
b. hypoalbuminemia
c. hyponatraemia
d. hypernatraemia

e. high cholesterol

*18.What are the diagnostic criterias for immune complex glomerulonephritis in children?*a. increased level of circulating immune complexes in serum
b. low levels of serum complement
c. diffuse damage of both kidneys according to kidney ultrasound
d. storage of immunoglobulins on the glomerular basement membrane
e.renal ultrasound data of unilateral renal damage

*19.Which factors determine the prognosis in secondary forms of nephrotic syndrome in children?*a.clinical and histological form
b. etiology
c. complications of the disease
d. complications as the result of the treatment
e. age of the patient

*20.The efficacy of treatment steroid-resistant nephrotic syndrome in children depends on following:*
a. morphological variant
b. expressiveness of tubulo-interstitial changes
c. fibroblastic component
d. clinical picture
e. hematuria

*21.Pathogenic and symptomatic treatment of chronic glomerulonephritis in children include following:*
a. corticosteroids
b. cytostatics
c. diuretics
d. antihypertensive treatment
e. antihypotension treatment

*22. What are the causes of premature death during rhe early development of chronic glomerulonephritis in children?*

a. acute renal failure
b. heart failure
c. pulmonary edema
d. hepatic failure
e. cerebral edema

*23.What include the symptomatic therapy in acute glomerulonephritis in children?*
a.macrolides
b. semisynthetic penicillins with clavulonic acid
c. diuretics
d. cytostatics
e.antihypertensives

*24. What are the criterias for remission of glomerulonephritis in children?*a. resumption of diuresis
b. disappearance of edema
c. absence of histopathological changes after 6 months
d. absence of hematuria
e. absence of histopathological changes after 1 year

*25.Secondary nephrotic syndrome can occur in the following diseases:*a.Alport syndrome
b. Down syndrome
c. Orbeli syndrome
d. hypoplastic renal dysplasia
e. cystic fibrosis

*26.What includes the clinical presentation of membranoproliferative glomerulonephritis in children ?*a. nephrotic syndrome
b. high blood pressure
c. hematuria
d. hypotension
e. nephritic syndrome

*27.Enumerate the complications of diuretic therapy:*

a. electrolytic disorders
b. ototoxicity
c. metabolic alkalosis
d. calcification in kidneys
e. increase in serum potassium

*28.What are the clinical manifestations of membranous glomerulonephritis in children?*a. nephritic syndrome
b. nephrotic syndrome
c. microhematuria
d. hypotension
e. macrohematuria

*29. What includes the treatement of nephrotic syndrome with minimal glomerular changes in children?*

a. prednisone dose 2 mg/kg/per day or 60 mg/m2

b. prednisone pulse therapy
c. cyclophosphamide
d. symptomatic therapy
e. plasmapheresis

*30. What syndromes are characteristic for chronic glomerulonephritis in children?*a. urinary syndrome
b. hypertensive syndrome
c. edematous syndrome (nephritic or nephrotic type)
d. nitrogen retention syndrome
e. hepato-renal syndrome

*31.Enumerate criterias for idiopathic nephritic syndrome in children:*
a. generalized edema
b. proteinuria >3.5g /24h
c. proteinuria up to1 g/24h
d. hypoalbuminemia
e. hypercholesterolemia

*32.What are the contraindications of renal biopsy in children?*a. renal artery aneurysm
b. solitary kidney
c. chronic kidney diseases V stages
d. hypertension
e. renal tuberculosis

### *33. What are the components of deposition in glomeruli in immune glomerular lesions?* a.circulating immunecomplexesb. ,,insitu” immune complexc. plateletsd. anti- glomerular basement membrane antibodye. cellular immune response

*34.What are the complications of nephrotic syndrome in children?*a. hypovolemic shock
b. thrombotic phenomena
c. urinary tractinfections
d. chronic renal failure
e. massive hydrothorax

**Pyelonephritis in children
Simple Complement**

1. C
2. A
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6. A
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8. E
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10. C
11. C
12. E

**Multiple complement**

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16. A,D,E
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18. A,B
19. A,B,D,E
20. A,B
21. A,B,C,D
22. A,B,C
23. A,B,C
24. A,B,C
25. A,B,C,D
26. B,C,D
27. A,B,C
28. A, B, C,D

**Pyelonephritis in children.Simple Complement.**

*1. What is the main etiologic agent of urinary tract infections in infants ?*a. e.coli
b. proteus
c. staphylococus
d. mycoplasma
e. L-form bacteria

*2. What is the characteristic of chronic pyelonephritis in children?*a. recurrent leucocyturia
b. prolonged febrile syndrome
c. pyuria
d. local purulent reactions
e. toxic-infectious shock

*3. Choose the main clinical syndrome of pyelonephritis in infants:*
a. asthenic syndrome
b. dysuric syndrome
c. dyspeptic syndrome
d. hypertensive syndrome
e. neurovegetative syndrome

*4. What is the screening method for the diagnosis of pyelonephritis in children?*a. cystography
b. kidneys andbladderultrasound
c. kidneys scintigraphy

d. computed tomography
e. intravenous urography

5. *A 5 years girl, previously healthy , is diagnosed with acute pyelonephritis. Which investigation is not essential for diagnosis at the moment?*

a. creatinine
b. urinalysis
c. serum cholesterol
d. urine culture
e. Niciporenco sample

*6. Select the correct statement about acute pyelonephritis in children:*a. inflammation of renal interstitial tissue
b. inflammation of the bladder
c. glomerular inflammation
d. tubular inflammation
e. ureters inflammation

*7. What investigation is mandatory in enuresis ?*a. kidney biopsy
b. cystography
c. computerized tomography of the kidneys
d. renal scintigraphy
e. intravenous urography

*8.What is the level of significant bacteriuria in pyelonephritis in children?*a.50000 colonies in1ml. urine
b. 10000 colonies in 1ml. urine
c. 40,000 colonies in 1ml. urine
d. the absence of microbial growth
e. < 100,000colonies in 1ml. urine

*9. Renal ultrasound in pediatric pyelonephritis determine all following paremeters, EXCEPT:*a. kidneys increased in size
b. hyperechoic parenchyma
c. edematous parenchyma
d. pyelocaliceal system expansion
e. residual urine after urination

*10.What is the normal urinary pH in children?*a. weak alkaline
b. strong alkaline
c. weak acid
d. strong acid
e. neutral

*11.What index of complete blood count changes in acute pyelonephritis in children?*a. hemoglobin
b. eosinophils
c. erythrocyte sedimentation rate
d. color index
e. glucose

*12. What is the contraindication for intravenous urography in children?*a. leucocyturia
b. renal colic
c. abdominal trauma
d. changes in kidney ultrasonography
e. anuria

**CM.**

*1. What are the causative agents of pyelonephritis in children?*a. e.coli
b. chlamydiae
c. candida albicans
d. mycoplasma infection with M.hominis
e.mycoplasma infection with M.tuberculosis

*2.What are the factors of local defence of urinary tract in children?*a. presence of IgA in urine
b. increased pH
c. low pH
d. fluctuations in osmolarity
e. Tamm-Horsfall uroprotein

*3.Choose the main mechanisms of kidney infection in children:*

a. urogenital
b. haematogenous
c. lymphogenous
d. airborne
e. endogenous

*4. What are characteristic clinical signs for acute pyelonephritis in children?*
a. fever > 38 0C, chills
b. dysfunctional voiding

c. pollakiuria
d. signs of intoxication
e. lumbar pain

*5. What are the indications of renal scintigraphy in children?*a. recurrent urinary tract infections
b. urinary tract infections atypical for the age under 3 years
c. within 4-6months after the acute episode of a urinary tract infection
d. renal agenesia
e. acute episode of urinary tract infection

*6. What instrumental investigations are required in the diagnosis schedule of acute pyelonephritis in children?*a. blood pressure monitoring
b. kidney ultrasonography
c. intravenous urography
d. cystomanometry
e. cystography

*7.What are the laboratory changes characteristic of pyelonephritis in children?*a. inflammatory reaction of blood
b. modification of urinary sediment
c. lowering C-reactive protein in the blood
d. hypogammaglobulinemia
e. decreased relative density of urine

*8. Select the characteristic modifications of urinary sediment in acute pyelonephritis in children:*a. bacteriuria < 50,000 colonies/ml
b. bacteriuria > 100,000 colonies/ml
c. proteinuria > 1gr/ l
d. proteinuria < 1gr / l
e.leucocyturia with neutrophil character >50%

*9. What represents the tubulo-interstitial disturbance of renal functional state?*a. increased osmolarity
b. decreased osmolarity
c. decreased relative density
d. increased relative density
e.low indice of creatinine clearance

*10.List the complications of pyelonephritis in children:*a. renal carbuncle
b. apostomatic nephritis
c. nephrolithiasis
d. Alport syndrome
e. papillary necrosis

*11.What are the indications for hospitalization of children with acute pyelonephritis?*a. mild form of acute pyelonephritis
b. acute pyelonephritis associated with other diseases under exacerbations
c. acute pyelonephritis in children of 10-15 years
d. acute pyelonephritis in children in the first months of life
e.mild forms of pyelonephritis accompanied by fever

*12.What are the risk factors for pyelonephritis in children?*

a. chronic foci of infection
b. frequent intercurrent infections
c. anemia
d. acute gastroduodenitis
e. cystitis

*13. What are the characteristic clinical manifestations of pyelonephritis in infants?*a. dysuric syndrome
b. suprapubic pain
c. prolonged febrile syndrome
d. dyspeptic syndrome
e. generalized toxic-infectious syndrome

*14.What are the local risk factors for pyelonephritis in children?*a. hydronephrosis
b. urolithiasis
c. abdominal tumor
d. Alport syndrome
e. polycystic kidney diseases

*15.What is the differential diagnosis of acute pyelonephritis in children?*a. glomerulonephritis
b. renal tuberculosis
c. cystitis
d. acute bronchitis
e. acute appendicitis

*16.What are the typical clinical manifestations of pyelonephritis in children less than 3 years old?*a. abdominal pain
b. dysuria
c. diarrhea
d. generalized infectious-toxic syndrome
e. chills

*17.Which factors amplify clinical manifestations of acute pyelonephritis in children?*

a. concomitant pathologies
b. age of the child
c. degree of physical development of the child
d. hereditary predisposition factors
e. body weight of the child

*18.What are the characteristics of obstructive pyelonephritis in children?*a. constant temperature rise
b. occurrence of acute pain in the affected lumbar area
c. absence of fever
d. increased pain in the lumbar area on micturition
e. lack ofpain

*19. Choose the antenatal factors predisposing to pyelonephritis:*a. nephropathy of the pregnancy
b. chronic pyelonephritis
c. acute dermatitis
d. common intercurrent infections
e. chronic foci of infection in pregnant women

*20.What changes are present in complete blood count in acute pyelonephritis in children?*a. increased eritrocites sedimentation rate
b. leukocytosis
c. eosinophilia
d. rise of hemoglobin
e. reduction of platelet count

*21.What are the indications of cystography in children?*a. enuresis beyond the age of 3-5 years
b.diurnal incontinence of urine
c. recurrent urinary infection
d. non functioning kidney
e. unilateral lumbar pain

*22.What are the indications radiological research methods of urinary tract in children?*a. renal colic
b. pyelonephritis at any age
c. abdominal trauma
d. acute appendicitis
e. hypersensitivity to iodine preparations

*23.What are the characteristics of urinary sample in acute pyelonephritis in children?*a. leucocyturia
b. urine culture >100,000colonies/ ml.urine
c. density loss of urine
d. proteinuria> 3.0 g/ l
e. erythrocyturia

*24. What drugs are recommended for oral therapy of urinary tract infection in children ?*a. nitrofurantoin
b. cefuroxime
c. cefixime
d. biseptol
e. gentamicin

*25. What are the indications of hospitalization of children with urinary tract infection?*

a. age <6 months
b. poor fluids intake

c. toxic appearance
d. urinary obstruction
e. moderate state

*26.What are the criterias of effectiveness of antibacterial therapy in children with acute pyelonephritis?*a. clinical improvement within 5-7 days of treatment initiation
b. diminution or disappearance of white blood cells at 2-3 days of treatment initiation
c. urine becomes sterile in 24-48 hours
d. clinical improvement within 24-48 hours after treatment initiation
e.worsening of clinical picture after 24 hours of treatment initiation

*27.What are the purposes of the therapy of urinary tract infection in children?*a. urine sterilization
b. prevent dissemination of infection
c. reducing the probability of kidney damage
d. identification ofthe pathogenic agent
e. treatment of intercurrent infections

*28. What drugs are used for prevention of urinary tract infections in children?*a. nalidixicacid
b. co- trimaxozol
c. methenamine
d. nitrofurantoin
e. ampicillin