

## Contents

Psoriatic arthritis .....	1
Single Choice .....	1
Multiple choice.....	5
Rheumatoid arthritis.....	9
Single Choice .....	9
Multiple choice.....	12
Reactive arthritis .....	17
Simple complement .....	17
Multiple choice.....	20
Gout.....	24
Single Choice .....	24
Multiple choice.....	28
Systemic lupus erythematosus .....	35
Single Choice .....	35
Multiple choice.....	38
Osteoarthritis .....	42
Single Choice .....	42
Multiple choice.....	45
Osteoporosis.....	50
Single Choice .....	50
Multiple choice.....	52

## Psoriatic arthritis

### Single Choice

1. Which of the following statements is correct when prescribing a NSAID in patients with rheumatic diseases:
  - A. Two NSAIDs can be prescribed simultaneously
  - B. Intravenous administration of a NSAID helps to avoid gastrointestinal toxicity
  - C. A NSAID can be prescribed to a patient receiving oral anticoagulants
  - D. Allergy to a NSAID class excludes the possibility to prescribe a NSAID form another class
  - E. To avoid adverse reactions, a NSAID has to be prescribed in a minimally efficient dose and duration
  
2. Symptomatic treatment of psoriatic arthritis includes:
  - A. Clarithromycin
  - B. NSAIDS
  - C. Benzatinbenzylpenicillin
  - D. D-penicilamine
  - E. Methotrexate
  
3. What rheumatic disease presents with arthritis mutilans?
  - A. Systemic lupus erythematosus
  - B. Rheumatoid arthritis
  - C. Reactive arthritis
  - D. Psoriatic arthritis
  - E. Gout
  
4. The CASPAR diagnostic criteria are used for the diagnosis of:
  - A. Rheumatoid arthritis
  - B. Psoriatic arthritis
  - C. Systemic lupus erythematosus
  - D. Reactive arthritis
  - E. Gout
  
5. Osteolytic lesions of phalanges and metacarpophalangeal joints with the aspect of “telescoped” fingers, are characteristic for:
  - A. Systemic lupus erythematosus
  - B. Rheumatoid arthritis
  - C. Reactive arthritis
  - D. Psoriatic arthritis
  - E. Gout
  
6. Axial involvement in psoriatic arthritis is characterized by:
  - A. Unilateral/ asymmetric sacroiliitis
  - B. Symmetric sacroiliitis
  - C. Atlanto-occipital involvement
  - D. Sacroiliac joints are not involved
  - E. The spinal column is involved uniformly
  
7. Psoriatic onychodystrophy can manifest as:
  - A. Pitting (punctiform erosion)
  - B. Solid fusion

- C. Fungal infections
- D. Progressive fissuration
- E. Nail hemorrhages

8. Distal interphalangeal joint osteolysis, extended skin lesions and nail dystrophy suggest the diagnosis of:

- A. Systemic lupus erythematosus
- B. Gout
- C. Psoriatic arthritis
- D. Osteoarthritis
- E. Rheumatoid arthritis

9. Which criterion is NOT used for the diagnosis of psoriatic arthritis?

- A. Negative rheumatoid factor
- B. Dactylitis
- C. Radiological proof of juxtaarticular new bone formation
- D. Positive anti-CCP antibodies
- E. Personal or family history of psoriasis

10. Management of psoriatic arthritis includes:

- A. Antibiotic administration
- B. Hemodialysis
- C. Immune suppressive treatment
- D. Antiviral treatment
- E. Immune stimulatory treatment

11. Choose the correct statement referring to Schöber's test in psoriatic spondylitis:

- A. Is a test for the examination of sacroiliac joints
- B. Measures lumbar mobility
- C. Measures stiffness at the level of dorsal segment of the spinal column
- D. Is a specific test for hip mobility
- E. Reveals peripheral arthritis

12. Which of the following diseases does not belong to spondyloarthropathies group?

- A. Ankylosing spondylitis
- B. Psoriatic arthritis
- C. Rheumatoid arthritis
- D. SAPHO syndrome
- E. Reactive arthritis

13. The indications for corticosteroid infiltrations in psoriatic arthritis are the following, EXCEPT:

- A. Synovitis
- B. Arthritis mutilans
- C. Plain lumbar radiculalgia
- D. Bursitis
- E. Carpal tunnel syndrome

14. Diagnosis of psoriatic arthritis can be established using criteria:

- A. CASPAR
- B. BASDAI

- C. EULAR
  - D. ACR
  - E. Ducket Jones
15. The most frequent form of psoriatic arthritis is:
- A. Asymmetric oligoarthritis
  - B. Distal interphalangeal arthritis
  - C. Arthritis mutilans
  - D. Axial involvement
  - E. Large joint involvement
16. CASPAR criteria are used for the diagnosis of:
- A. Rheumatoid arthritis
  - B. Systemic lupus erythematosus
  - C. Osteoarthritis
  - D. Psoriatic arthritis
  - E. Systemic sclerosis
17. Aspect of “telescoped” fingers is characteristic for:
- A. Systemic lupus erythematosus
  - B. Gout
  - C. Osteoarthritis
  - D. Rheumatoid arthritis
  - E. Psoriatic arthritis
18. Phalangeal involvement with the aspect of “pencil in cup” is characteristic for:
- A. Systemic lupus erythematosus
  - B. Gout
  - C. Osteoarthritis
  - D. Rheumatoid arthritis
  - E. Psoriatic arthritis
19. The most frequent age of onset of psoriatic arthritis is:
- A. 35 – 55 years
  - B. 20 – 35 years
  - C. 15 – 25 years
  - D. 55 – 70 years
  - E. 65 – 75 years
20. According to CASPAR diagnostic criteria for psoriatic arthritis maximal score belongs to the following criteria:
- A. Personal or family history of psoriasis
  - B. Current skin psoriasis
  - C. Negative rheumatoid factor
  - D. Psoriatic nail dystrophy found at present examination
  - E. X-ray data characteristic for juxtaarticular new bone formation

## Multiple choice

21. Which of the following classes of NSAIDs are recommended for patients with psoriatic arthritis?
- A. Coxibs
  - B. Salicylates
  - C. Pyrazoles
  - D. Indols
  - E. Oxicams
22. In which of the following rheumatological diseases immune suppressive treatment is considered obligatory:
- A. Psoriatic arthritis
  - B. Gout
  - C. Rheumatoid arthritis
  - D. Osteoarthritis
  - E. Bursitis
23. Which of the following extra-articular manifestations are characteristic for psoriatic arthritis:
- A. AA amyloidosis
  - B. Anterior uveitis
  - C. Meningitis
  - D. Reflux-esophagitis
  - E. IgA nephropathy
24. Diagnostic criteria for psoriatic arthritis include:
- A. Skin psoriasis
  - B. Negative rheumatoid factor
  - C. Positive rheumatoid factor
  - D. History of dactylitis established by rheumatologist
  - E. Characteristic X-ray data
25. In psoriatic arthritis treatment includes:
- A. Kinetotherapy
  - B. Immune suppressive therapy
  - C. Antibacterial therapy
  - D. Manual therapy
  - E. Symptomatic treatment
26. What laboratory tests help to determine activity of psoriatic arthritis:
- A. Complete blood count
  - B. ESR
  - C. Rheumatoid factor
  - D. Fibrinogen
  - E. C- reactive protein
27. Specific complications of corticosteroid infiltrations in psoriatic arthritis are the following:
- A. Septic arthritis

- B. Local hyperkeratosis
  - C. Rupture of tendons
  - D. Local hyperpigmentation
  - E. Acute microcrystalline arthritis
28. The following forms of psoriatic arthritis are established:
- A. Symmetric oligoarthritis
  - B. Axial arthritis
  - C. Arthritis mutilans
  - D. Osteoarthritis
  - E. Entesopathies
29. Distinctive features of psoriatic arthritis are:
- A. Entesopathies
  - B. Mucosal ulcers
  - C. Dactylitis
  - D. Iritis
  - E. Thrombocytopenia
30. Diagnostic criteria for psoriatic arthritis include:
- A. Oral ulcers
  - B. Fever
  - C. History of psoriasis
  - D. Negative rheumatoid factor
  - E. Characteristic radiological manifestations
31. For the mutilans form of psoriatic arthritis the following radiological signs are characteristic:
- A. Osteolysis
  - B. Osteosynthesis
  - C. Bone ankylosis
  - D. Osteomalacia
  - E. Pseudofractures
32. Mark the correct statements for psoriatic arthritis:
- A. Enthesitis is an important feature
  - B. Ocular involvement often manifests as anterior uveitis
  - C. Enthesitis is not characteristic
  - D. Cardiac involvement manifests as aortic valve disease
  - E. Ocular involvement is not characteristic
33. Components of diagnostic criteria for psoriatic arthritis (CASPAR) are:
- A. Psoriatic nail involvement
  - B. Dactylitis with phalangeal swelling
  - C. Joint crepitation
  - D. Uveitis
  - E. Skin psoriasis
34. Remissive (disease modifying) treatment used in psoriatic arthritis includes:
- A. Alendronic acid

- B. Methotrexate
- C. Diclofenac
- D. Indomethacine
- E. Sulfasalazine

35. The rules for glucocorticosteroid prescription in patients with psoriatic arthritis are the following:

- A. To be used with caution because the discontinuation of corticosteroid therapy leads to exacerbations of skin manifestations
- B. To be used particularly for patients with psoriatic spondylitis
- C. Corticosteroid monotherapy may be recommended for patients with NSAID intolerance
- D. It is preferred in young patients
- E. Moderate-small dosages are preferred

36. The most frequent complications of NSAIDs and glucocorticoid hormone treatment are:

- A. Heart failure
- B. Uveitis
- C. Fotosensitivity
- D. Hemorrhage from upper gastrointestinal tract
- E. Gastroduodenal ulcer perforations

37. Complications found in patients with psoriatic arthritis can be the following:

- A. Anemia
- B. Exfoliative dermatitis
- C. Visceral amyloidosis
- D. Heart failure
- E. Seizures

38. Phalangeal involvement in psoriatic arthritis can present as:

- A. "Sausage finger"
- B. "Telescoped fingers"
- C. "Finger clubbing"
- D. "Pencil-in-cup fingers"
- E. "Swan-neck fingers"

39. Treatment of psoriatic arthritis may include:

- A. NSAIDs
- B. Glucocorticoids
- C. Methotrexate
- D. Antibiotics
- E. Etanercept

40. Select specific radiological signs for psoriatic arthritis:

- A. Symmetrical joint involvement
- B. Tendency to an asymmetrical joint implication
- C. Involvement of distal interphalangeal joints
- D. Osteolysis

- E. Syndesmophytes
41. Select distinguishing X-ray signs for psoriatic arthritis:
- A. Bone ankylosis
  - B. Relative crosscut of metacarpophalangeal joints
  - C. Relative crosscut of metatarsophalangeal joints
  - D. Tendency to oligoarticular distribution
  - E. Marginal erosions, geodes
42. What rheumatologic diseases are associated with the HLA-B27 presence:
- A. Rheumatoid arthritis
  - B. Reactive arthritis
  - C. Ankylosing spondylitis
  - D. Systemic lupus erythematosus
  - E. Psoriatic arthritis
43. The following diseases are included in the seronegative spondyloarthritis group:
- A. Enteropathic arthritis
  - B. Rheumatoid arthritis
  - C. Gonococcal arthritis
  - D. Psoriatic arthritis
  - E. Juvenile spondyloarthropathy
44. The following statements are correct about treatment of psoriatic arthritis with TNF- $\alpha$  antagonists:
- A. Treatment with TNF- $\alpha$  antagonists should be temporarily suspended in patients to undergo surgery
  - B. TNF- $\alpha$  antagonists do not influence prognosis in patients with congestive heart failure or advanced coronary artery disease
  - C. Testing for tuberculosis during treatment is not recommended
  - D. Screening for latent tuberculosis should be performed until initiation of treatment with a TNF- $\alpha$  antagonist
  - E. They are contraindicated in patients with chronic infections such as osteomyelitis and tuberculosis, and patients with active infections
45. Biological treatment in psoriatic arthritis can include:
- A. Monoclonal antibodies
  - B. Receptor antagonists
  - C. Blood transfusions
  - D. Interferon
  - E. Soluble receptors
46. Choose variants of surgery used in psoriatic arthritis:
- A. Sinovectomy
  - B. Interventions for carpal tunnel syndrome, tendon ruptures, Baker cyst rupture
  - C. Arthroplasty with total replacement of affected joint
  - D. Surgical treatment is indicated during the active periods of the disease
  - E. It is effective in most patients with mutilating form



47. Select correct statements about use of NSADs in psoriatic arthritis:
- A. Prevent appearance of joint manifestations
  - B. Diminish pain and inflammation
  - C. Their effect lasts even after treatment cessation
  - D. Do not modify the evolution of joint erosions
  - E. Have just symptomatic action
48. Remissive (disease modifying) treatment of psoriatic arthritis can include:
- A. Celecoxib
  - B. Methotrexate
  - C. Hydroxychlorquine
  - D. Leflunomide
  - E. Indomethacine
49. The balneo-physical treatment of psoriatic arthritis has the following objectives:
- A. Pain management
  - B. Treatment of flare-ups
  - C. Muscle tonus improvement
  - D. Prevention of osteoporosis
  - E. Prevention of muscle atrophies
- 50 Disease activity in psoriatic arthritis can be monitored using:
- A. Erythrocyte sedimentation rate
  - B. C-reactive protein
  - C. Fibrinogen
  - D. HLA-B27 positivity
  - E. Alkaline phosphatase

## Rheumatoid arthritis

### Single Choice

1. What statement regarding extra-articular involvements in rheumatoid arthritis is FALSE?
- A. Appear before joint involvement
  - B. Are determined by lympho-plasmocytic infiltrates and/or vasculitis
  - C. Appear in severe cases
  - D. Are constantly associated with high titers of rheumatoid factor
  - E. Concentration of circulating immune complexes is increased
2. What joint areas are usually affected in rheumatoid arthritis:
- A. Distal interphalangeal joints
  - B. Sacroiliac joints
  - C. Interapophyseal joints of the lumbar column
  - D. Atlanto-axial joint
  - E. Acromio-clavicular joint

3. Joint involvement in rheumatoid arthritis is:
- A. Symmetric
  - B. Oligoarticular
  - C. Migratory
  - D. Monoarticular
  - E. Reversible
4. Respiratory tract involvement in rheumatoid arthritis can manifest as:
- A. Asthma
  - B. Pulmonary thromboembolism
  - C. Pneumothorax
  - D. Hilar adenopathy
  - E. Pleurisy
5. Choose a correct statement about pulmonary involvement in rheumatoid arthritis.
- A. Pleurisy is a frequent clinical manifestation
  - B. Pneumothorax can be a complication of subpleural rheumatoid nodules
  - C. Interstitial fibrosis may be a complication of corticosteroid therapy
  - D. Caplan's syndrome is a complication of Methotrexate therapy
  - E. Bronchiolitis usually has a slight evolution
6. What statement regarding Methotrexate administration in rheumatoid arthritis is FALSE:
- A. It is considered a gold standard in non-biologic remissive treatment
  - B. It is used in cases of increased immunological activity
  - C. Oral administration is done once a week
  - D. The treatment is a short term one
  - E. Hepatic toxicity demands periodic hepatic enzyme control
7. What is the most common side effect of non-steroidal anti-inflammatory drugs treatment?
- A. Gastro-intestinal tract damage
  - B. Hematopoietic disorders
  - C. Nephrotoxic action
  - D. Neurotoxic action
  - E. Allergic reactions
8. What DMARD in Rheumatoid arthritis is considered the "gold standard" of treatment?
- A. Sulfasalazine
  - B. Methotrexate
  - C. Azathioprine
  - D. Hydroxychloroquine
  - E. Cyclophosphamide
9. What renal-urinary complication can appear in severe and long term evolution of rheumatoid arthritis?
- A. Pyelonephritis
  - B. Renal amyloidosis
  - C. Micronephrolitiasis
  - D. Glomerulonephritis

- E. Urethritis
10. Characteristic modification in rheumatoid arthritis is:
- A. Increased bone mineral density
  - B. Osteophyte
  - C. Transient inflammatory synovitis
  - D. Syndesmophyte
  - E. Persistent inflammatory synovitis
11. The major genetic factor in rheumatoid arthritis is:
- A. HLA DR5
  - B. HLA DR4
  - C. HLA Dw16
  - D. HLA Dw15
  - E. HLA B27
12. An infectious agent possibly involved in the etiology of rheumatoid arthritis can be:
- A. Epstein – Bar virus
  - B. Hepatitis B virus
  - C. Mycoplasma hominis
  - D. Staphylococcus aureus
  - E. Chlamydia trachomatis
13. Major cellular population in rheumatoid synovitis is:
- A. NK lymphocytes
  - B. B lymphocytes
  - C. TCD8+ lymphocytes
  - D. TCD4+ memory lymphocytes
  - E. Macrophages
14. Damage of what joint component determines pain in rheumatoid arthritis?
- A. Ligaments
  - B. Cartilage
  - C. Subchondral bone
  - D. Synovial membrane
  - E. Capsule
15. Characteristic X-ray change in rheumatoid arthritis is:
- A. Syndesmophytes
  - B. Joint space narrowing
  - C. Osteophytes
  - D. Bony erosions
  - E. Bony sequestra
16. Use of methotrexate in rheumatoid arthritis requires the supplementation with:
- A. Cyanocobalamin
  - B. Thiamine
  - C. Ascorbic acid
  - D. Vitamin D

- E. Folic acid
17. Inflammatory process in rheumatoid process begins from one of the following joint components:
- A. Joint capsule
  - B. Synovium
  - C. Cartilage
  - D. Subchondral bone
  - E. Ligaments
18. Choose the most correct description of the joint syndrome in rheumatoid arthritis:
- A. Chronic, additive, peripheral, symmetric polyarthritis
  - B. Chronic, migratory, peripheral, symmetric oligoarthritis
  - C. Chronic, migratory, peripheral, symmetric polyarthritis
  - D. Chronic, additive, peripheral, asymmetric polyarthritis
  - E. Chronic, additive, peripheral, symmetric polyarthritis with axial involvement
19. The incidence of rheumatoid arthritis is:
- A. Approximately 0.2/1000 in women and 0.5/1000 in men
  - B. Approximately 10% of the general population
  - C. Equal between sexes
  - D. Higher in male patients
  - E. Approximately 0.5/1000 in women and 0.2/1000 in men
20. The prevalence of rheumatoid arthritis is:
- A. Equal between sexes
  - B. Approximately 10% of general population
  - C. Approximately 1.7% of women and 0.7% of men
  - D. Higher in male patients
  - E. Approximately 0.7% of women and 1.7% of men

## Multiple choice

21. Rheumatic diseases directly associated with lung involvement are:
- A. Systemic lupus erythematosus
  - B. Rheumatoid arthritis
  - C. Osteoarthritis
  - D. Osteoporosis
  - E. Acute rheumatic fever
22. What X-ray changes appear in rheumatoid arthritis?
- A. Syndesmophytes
  - B. Juxta-articular osteoporosis
  - C. Periosteal thickening
  - D. Marginal erosions
  - E. Bone ankyloses
23. Rheumatoid vasculitis can have the following expressions:

- A. Purpura
  - B. Polyneuropathy
  - C. Myocardial infarction
  - D. Skin ulcers
  - E. Keratoderma blenorrhagica
24. What joints are the most frequently involved ones in rheumatoid arthritis?
- A. Distal interphalangeal joints
  - B. Proximal interphalangeal joints
  - C. The first tarso-metatarsal joint
  - D. Cervical vertebral joints
  - E. Lumbar vertebral joints
25. Name the risk factors of rheumatoid arthritis.
- A. Female sex
  - B. Male sex
  - C. Smoking
  - D. Environmental factors, such as climate and urbanization
  - E. Sedentary lifestyle
26. The earliest lesions in rheumatoid arthritis are :
- A. Microvascular lesions
  - B. Juxtaarticular osteoporosis
  - C. Increase in synovial cell number
  - D. Local hypervascularization
  - E. Perivascular inflammation with granulocytes
27. Symptoms specific for rheumatoid arthritis are:
- A. Polyarticular involvement
  - B. Symmetrical involvement
  - C. Brutal onset in 90% of cases
  - D. Anorexia
  - E. In acute onset – fever, splenomegaly
28. The following sex correlations are true for rheumatoid arthritis:
- A. female : male ratio of 2.2 – 2.5 : 1
  - B. female : male ratio of 5 : 1
  - C. female : male ratio of 1 : 2.2 – 2.5
  - D. by the age of 70, female number = male number
  - E. male : female ratio is equal at all ages
29. The most important proofs of autoimmunity in rheumatoid arthritis are:
- A. Class II DR8 HLA histocompatibility antigens
  - B. Rheumatoid factor
  - C. Class II HLA DR5 histocompatibility antigens
  - D. Anti – cyclic – citrullinated – peptide antibodies
  - E. Class II DR1 and DR7 HLA histocompatibility antigens
30. What antigens of the major histocompatibility complex are expressed in rheumatoid arthritis?

- A. HLA-B27
  - B. HLA-DR1
  - C. HLA-A
  - D. HLA-C
  - E. HLA-DR4
31. The following statements regarding immunological changes in rheumatoid arthritis are true:
- A. Rheumatoid factor is positive in 100% patients
  - B. Positive rheumatoid factor is absolutely necessary for the diagnosis of rheumatoid arthritis
  - C. Rheumatoid arthritis, although having a high sensitivity, is not as specific as anti-CCP antibodies
  - D. Anti-CCP antibodies have 95% specificity
  - E. Anti-CCP antibodies presence is mandatory for the diagnosis of rheumatoid arthritis
32. What drugs slow down progression of joint involvement in rheumatoid arthritis, according to X-ray data?
- A. Aspirin
  - B. Leflunomide
  - C. Methotrexate
  - D. Diclofenac
  - E. Glucocorticoids
33. As a function of rheumatoid factor presence in blood serum of patients with rheumatoid arthritis, the following forms of disease can be distinguished:
- A. Seroneutral
  - B. Seropositive
  - C. Serosanguine
  - D. Seronegative
  - E. Sero-compatible
34. What symptoms can be present in rheumatoid arthritis?
- A. Morning stiffness
  - B. Pain on palpation of Achilles tendon
  - C. Diminishing of hand gripping force
  - D. Distal interphalangeal joint swelling
  - E. Proximal interphalangeal joint swelling
35. What ocular manifestations can be found in rheumatoid arthritis?
- A. Iritis
  - B. Episcleritis
  - C. Chorioretinitis
  - D. Cataract
  - E. Dry (sicca) keratoconjunctivitis
36. In what diseases can be found rheumatoid factor?
- A. Amyloidosis
  - B. Pseudogout
  - C. Hepatic disorders

- D. Sarcoidosis
  - E. Rheumatoid arthritis
37. Which radiological changes are specific for rheumatoid arthritis?
- A. Epiphyseal periarticular osteoporosis
  - B. Atlanto – axial joint subluxation
  - C. Marginal erosions
  - D. Joint space narrowing
  - E. Periostitis
38. What nervous system disorders can be found in rheumatoid arthritis?
- A. Medullary compression
  - B. Sensitive polyneuropathy
  - C. Multiple sclerosis
  - D. Carpal tunnel syndrome
  - E. "Coyne equine" syndrome
39. What statements regarding rheumatoid nodules are true?
- A. Are found in 25 – 30% of patients with rheumatoid arthritis
  - B. Are localized mainly in olecranon region
  - C. Usually are associated with rheumatoid factor
  - D. Can disappear after initiation of remissive drugs
  - E. Are rarely associated with the development of rheumatoid vasculitis
40. Select the clinical signs characteristic for rheumatoid arthritis:
- A. Morning stiffness > 1 hour
  - B. Nodular erythema
  - C. Pulmonary nodules
  - D. Aortitis
  - E. Symmetric polyarthritis
41. What ocular manifestations can be found in patients with rheumatoid arthritis?
- A. Conjunctivitis
  - B. Episcleritis
  - C. Chorioretinitis
  - D. Scleromalacia perforans
  - E. Keratoconjunctivitis sicca
42. What statements regarding heart involvement in rheumatoid arthritis are true?
- A. Pericarditis is frequently detected on necropsy
  - B. Myocarditis is characteristic
  - C. Mitral insufficiency develops rarely
  - D. Conductibility disorders can be related with intracardiac formation of rheumatoid nodules
  - E. Atherosclerosis develops rarely
43. Select hand deformities characteristic for rheumatoid arthritis:
- A. "Boutonniere" deformity
  - B. Heberden nodules

- C. Ulnar deviation of fingers
  - D. "Swan-neck" deformity
  - E. Distal interphalangeal joint ankylosis
44. The following statements explain female predominance in rheumatoid arthritis patients :
- A. Women have a higher serum immunoglobulin level of all classes, especially IgM
  - B. Women show a more exaggerated immune response with hyperactivity of humoral immunity
  - C. Improvement of symptoms in 90% of patients during pregnancy and a marked worsening of rheumatoid arthritis disease activity in post-partum period
  - D. Hypogonadal men are less prone to developing of rheumatoid arthritis
  - E. Men are more frequently affected than women
45. What joints are involved in the pathological process in rheumatoid arthritis?
- A. Synovial joints
  - B. Manubrio – sternal joint
  - C. Pubic symphysis
  - D. Disco – vertebral joints
  - E. Temporo – mandibular joints
46. Choose correct statements regarding rheumatoid nodules:
- A. Are the most frequent extra – joint manifestation
  - B. Are localized subcutaneously, have a variable consistency (from soft to elastic), can be mobile or adherent to periosteum or tendons
  - C. Have variable sizes (from a couple of mm to a couple of cm), or can be multicentric
  - D. Can become infected and sometimes make fistulas
  - E. Are an absolute indication for surgical treatment
47. What statements regarding rheumatoid factor are true?
- A. Can belong to any class of immunoglobulins
  - B. Can appear in serum of patients with viral hepatitis
  - C. Can be found in healthy persons in low titers
  - D. In rheumatoid arthritis high titers are associated with systemic manifestations
  - E. Decrease in level under the action of paracetamol
48. Imaging methods useful for diagnostic of rheumatoid arthritis are:
- A. Simple hand and feet joint X –ray
  - B. DXA osteodensitometry
  - C. Joint ultrasound
  - D. Magnetic Resonance Imaging of the joint
  - E. Angiography
49. Non-steroidal anti-inflammatory drugs in rheumatoid arthritis. Choose correct statements:
- A. Decrease pain
  - B. Do not decrease inflammation
  - C. Do not modify progression of joint erosions
  - D. Do not influence the development of extra –joint manifestations
  - E. Have a purely symptomatic effect that lasts only for the duration of administration



50. Administration of methotrexate in rheumatoid arthritis is performed:
- A. Orally
  - B. Intramuscularly
  - C. Intravenously
  - D. Using nasal sprays
  - E. Subcutaneously

## Reactive arthritis

### Simple complement

1. What is the most frequent extra – joint manifestation in reactive arthritis?
  - A. Aortic regurgitation
  - B. Congestive heart failure
  - C. Circinate balanitis
  - D. Atrio-ventricular conduction disorders
  - E. Acute anterior uveitis
  
2. What immune - genetic marker plays an important role in pathogenesis of reactive arthritis?
  - A. HLA B27
  - B. HLA DR3
  - C. HLA DR4
  - D. HLA B17
  - E. HLA B23
  
3. What joint is most frequently affected in reactive arthritis?
  - A. Sacroiliac joint
  - B. Wrist joint
  - C. Distal interphalangeal joint
  - D. Proximal interphalangeal joint
  - E. Metacarpophalangeal joint
  
4. Schöber test represents:
  - A. A method of assessment of lumbar column extension
  - B. Appreciates rotation movements of lumbar column
  - C. Appreciates extension of dorsal column
  - D. A method of assessment of lumbar column mobility
  - E. Establishes the degree of hip mobility
  
5. Select etiological treatment used in reactive arthritis:
  - A. Corticosteroids
  - B. Cytostatics
  - C. Antibiotics
  - D. Antimalarial drugs
  - E. Gold salts

6. Reactive arthritis is more frequently found in:
- A. Adults over 60 years old
  - B. Children under 5 years
  - C. Adults between 18 and 40 years old
  - D. During puberty
  - E. In the 50 – 60 years decade
7. What *Shigella* specie was the most frequently responsible for reactive arthritis?
- A. *Shigella sonnei*
  - B. *Shigella boydii*
  - C. *Shigella dysenteriae*
  - D. *Shigella flexneri*
  - E. *Shigella fonyery*
8. The following laboratory data are found in reactive arthritis, with one exception:
- A. Synovial fluid presents features of specific inflammation with lymphocyte predominance
  - B. Moderate anemia
  - C. Elevated ESR in the acute phase of the disease
  - D. In the majority of ethnical groups 50 – 75% of patients are HLA B27 positive
  - E. Tendency to increased acute phase reactants
9. Mark eye manifestations that can be observed in reactive arthritis:
- A. Conjunctivitis
  - B. Corneal ulcer
  - C. Cataract
  - D. Retinitis
  - E. Macular dystrophy
10. Choose the right statement about treatment of reactive arthritis:
- A. Sulfasalazine up to 3 g/day can be benefic in patients with persistent reactive arthritis
  - B. Immunosuppressive agents are used in early stages
  - C. In severe cases Methotrexate 150 mg/week is used
  - D. Gold salts are useful as first line treatment option
  - E. Systemic glucocorticoids are used in tendinitis
11. What is the most frequent form of joint involvement in reactive arthritis?
- A. Symmetric polyarticular
  - B. Axial with lumbar ankylosis
  - C. Axial with cervical ankylosis
  - D. Asymmetric oligoarticular
  - E. Mutilant
12. The most frequent manifestation of spinal column involvement in reactive arthritis is:
- A. Spondylolisthesis
  - B. “Bamboo column”
  - C. Spondyloarthritis
  - D. Bone ankylosis
  - E. Osteoporotic fracture

13. Choose a correct statement about Methotrexate use in reactive arthritis :
- A. It is indicated in all patients
  - B. It is indicated in the absence of axial involvement
  - C. It is indicated in systemic involvement
  - D. It is indicated in a slight evolution of the disease
  - E. It is indicated in pulmonary complications
14. What remissive remedy is recommended for reactive arthritis treatment?
- A. Mofetil mycophenolate
  - B. Cyclosporine A
  - C. Phenylbutazone
  - D. D – Penicillamine
  - E. Methotrexate
15. What manifestation is characteristic for reactive arthritis?
- A. Diffuse vertebral ankylosis
  - B. Symmetrical syndesmophytes
  - C. Osteolysis
  - D. Dactylitis
  - E. Atlanto – occipital joint involvement
16. An infectious episode precedes the symptoms of reactive arthritis within:
- A. 1 – 4 weeks
  - B. 4 – 8 weeks
  - C. 1 – 4 months
  - D. 3 – 6 weeks
  - E. 3 – 6 months
17. Reactive arthritis is defined as:
- A. Reiter syndrome
  - B. The triad of: arthritis, urethritis and conjunctivitis
  - C. A clinical syndrome in a host organism with genetic susceptibility, initiated by an etiological agent
  - D. Undifferentiated spondyloarthritis
  - E. Is mandatorily associated with HLA – B27
18. What bacteria does NOT play any role in the triggering of reactive arthritis?
- A. Yersinia
  - B. Shigella
  - C. Salmonella
  - D. Staphylococcus epidermidis
  - E. Ureaplasma urealyticum
19. Characteristic finding for reactive arthritis is:
- A. Positive anti – CCP antibodies
  - B. Positive rheumatoid factor
  - C. Negative rheumatoid factor
  - D. Low serum in IgA level

- E. Positive antinuclear antibodies (ANA)
20. The most frequent agent responsible for urogenital reactive arthritis is:
- A. *Shigella sonnei*
  - B. *Shigella flexneri*
  - C. *Chlamydia trachomatis*
  - D. *Shigella dysenteriae*
  - E. *Ureaplasma hominis*

## Multiple choice

1. Choose frequent localizations of enthesitis in reactive arthritis:
- A. Costo – vertebral junction
  - B. Iliac crista
  - C. Processus spinosus of L5
  - D. Proximal insertion of Achill tendon
  - E. Greater trochanter
2. Choose what statements about vertebral column involvement in reactive arthritis are true:
- A. Inflammatory back pain
  - B. Mechanical pain
  - C. Patients with recent onset rapidly develop limitations of vertebral column mobility
  - D. Syndesmophytes are formed
  - E. “Bamboo column” aspect is not reached
3. Patients with reactive arthritis refractory to NSAIDs and sulfasalazine, can respond to remissive remedies such as:
- A. Infliximab
  - B. Phenylbutazone
  - C. D – Penicillamine
  - D. Cyclosporine
  - E. Methotrexate
4. What are eye involvements found in reactive arthritis?
- A. Asymptomatic, transitory conjunctivitis
  - B. Aggressive anterior uveitis
  - C. Trophic ulcers
  - D. Retinal hemorrhages
  - E. Optic nerve atrophy
5. Choose true statements about reactive arthritis:
- A. It is a suppurative joint disease
  - B. It develops in people with genetic predisposition
  - C. It develops as a result of some arthrogenic infections
  - D. It develops on the background of joint trauma
  - E. It is characterized by an autoimmune process

6. Select techniques which can demonstrate changes in reactive arthritis:
- A. Plain joint X – ray
  - B. Computerized tomography
  - C. Magnetic resonance imaging
  - D. Osteodensitometry
  - E. Internal organs ultrasound
7. Reactive arthritis is a:
- A. Consequence of an intestinal infection, predominantly in males
  - B. Consequence of urogenital infections, predominantly in males
  - C. Consequence of intestinal infections, equally found in both sexes
  - D. Consequence of urogenital infections, equally found in both sexes
  - E. Consequence of urogenital infections, predominantly in females
8. Urogenital reactive arthritis is characterized by:
- A. Positive response to antibiotics
  - B. Frequent back pain
  - C. Association with urethritis
  - D. Frequent involvement of upper extremities
  - E. Frequent involvement of lower extremities
9. “Sausage like digit” is found in the following diseases:
- A. Reactive arthritis
  - B. Gout
  - C. Psoriatic arthritis
  - D. Rheumatoid arthritis
  - E. Osteoarthritis
10. What methods are used to determine the causative agent in reactive arthritis?
- A. Ureteral or cervical smear for the chain polymerization reaction
  - B. Hemoculture
  - C. Synovial fluid culture
  - D. Serological: assessment of specific antibodies in the blood
  - E. Culture of faeces for enteral agents
11. Clinical manifestations of reactive arthritis include:
- A. Dactylitis
  - B. Symmetric polyarthritis
  - C. Urethritis
  - D. Arthritis predominantly of upper extremities
  - E. Third degree atrioventricular conduction block
12. What X-ray changes are found in initial forms of reactive arthritis?
- A. Marginal erosions
  - B. Radiological changes may be absent
  - C. Joint space narrowing
  - D. Spurs at the insertion of plantar fascia
  - E. Juxta-articular osteoporosis

13. The most frequently affected joints in reactive arthritis are:
- A. Hips and shoulders (girdle joints)
  - B. Talocrural joints
  - C. Cervical column
  - D. Knee
  - E. Finger joints
14. Skin and mucosal lesions in reactive arthritis are the following :
- A. Oral ulcers – deep, painful
  - B. Keratoderma blenorrhagica on palms and soles
  - C. Keratoderma blenorrhagica with extended lesions in immunocompromised patients
  - D. Circinate balanitis
  - E. Trophic ulcers of the lower extremities
15. Which of the following elements allow the assessment of disease progression in reactive arthritis?
- A. X ray exam of peripheral joints
  - B. Inflammatory markers evaluation
  - C. HLA-B27 antigen determination
  - D. Schöber test dynamics
  - E. Development of asymmetric syndesmophytes in the spinal column
16. Which of the following laboratory abnormalities can be found in reactive arthritis?
- A. Increased level of C – reactive protein
  - B. HLA-B27 present in 50 – 75% of patients
  - C. Mild normochromic, normocytic anemia
  - D. Hyperchromic megaloblastic anemia
  - E. Decreased serum IgA level
17. Choose complications of long-standing reactive arthritis:
- A. Chronic keratoconjunctivitis
  - B. “Cauda equina” syndrome
  - C. Suppurated acute arthritis
  - D. Antiphospholipid syndrome
  - E. Aortic valve insufficiency
18. Renal impairment in reactive arthritis can be presented by:
- A. Chronic pyelonephritis
  - B. Acute renal failure
  - C. IgA Nephropathy
  - D. Fanconi syndrome
  - E. Renal amyloidosis
19. Which of the following statements are true in reactive arthritis?
- A. Aortic insufficiency develops in a small number of cases
  - B. Chronic inflammatory intestinal involvement is present
  - C. Diffuse pulmonary involvement manifests through fibrosis
  - D. IgA nephropathy was reported with increased frequency

- E. Scar tissue can be found in the interventricular septum
20. Enthesitis in reactive arthritis is characterized by:
- A. Erosive lesions
  - B. Exuberant synovial villi
  - C. Inflammatory lesions
  - D. Ossification in final stages
  - E. Uric acid deposition
21. What are the complications with poor life prognosis in reactive arthritis:
- A. Spinal column trauma
  - B. Malabsorption syndrome
  - C. Aortic insufficiency
  - D. Respiratory failure
  - E. Renal amyloidosis
22. Which statements are true for the treatment of reactive arthritis?
- A. Sulfasalazine in divided doses until 3 g/day can be benefic in patients with persistent reactive arthritis
  - B. Systemic glucocorticoids are routinely used in the treatment of reactive arthritis
  - C. Gold salts are very useful in the treatment of reactive arthritis
  - D. Uveitis requires aggressive glucocorticoid treatment
  - E. Tendinitis can benefit from intra-lesional administration of glucocorticoids
23. Clinical manifestations of reactive arthritis can be triggered by an enteric infection with agents from the following species:
- A. Shigella
  - B. Streptococcus
  - C. Salmonella
  - D. Yersinia
  - E. Escherichia coli
24. Muco-cutaneous involvement in reactive arthritis can manifest as:
- A. Nail dystrophy
  - B. Circinate balanitis
  - C. Skin ulcers
  - D. Palpable purpura
  - E. Pyoderma gangrenosum
25. Specify which of the following changes are common for reactive arthritis:
- A. Asymmetric arthritis
  - B. "Sausage -like" digit
  - C. Nail involvement
  - D. Oral ulcers
  - E. Encephalitis
26. In reactive arthritis, serological proof of recent infection can be found, with a marked rise in antibody titer against:
- A. Klebsiella

- B. Yersinia
  - C. Streptococcus
  - D. Salmonella
  - E. Chlamydia
27. Which of the following microorganisms can be involved in triggering of reactive arthritis:
- A. Yersinia pseudotuberculosis
  - B. Ureaplasma urealyticum
  - C. Bordetella pertussis
  - D. Clostridium difficile
  - E. Neisseria gonorrhoeae
28. Select clinical manifestations that can be found in reactive arthritis:
- A. Fatigue and general physical weakness
  - B. Diffuse pulmonary fibrosis
  - C. Fever
  - D. Arthritis, usually asymmetric
  - E. Weight loss
29. Select the extra – articular manifestation of reactive arthritis:
- A. Aortic insufficiency
  - B. Pulmonary fibrosis
  - C. Atrioventricular conductivity disorders
  - D. Nephrotic syndrome
  - E. Mucosal lesions
30. Pain at the level of axial skeleton in reactive arthritis can be caused by:
- A. Enthesitis
  - B. Muscle spasm
  - C. Sacroiliitis
  - D. Mechanical overuse in the absence of inflammation
  - E. Changes in biomechanical properties of subchondral bone

## Gout

### Single Choice

1. Select risk factors for of gout development:
- A. Female gender
  - B. Males gender
  - C. Hypothyroidism
  - D. Environmental factors such as climate and urbanization
  - E. Physical inactivity



2. Specify characteristic hand deformities occurring during gout evolution:
  - A. Boutonniere deformity
  - B. Pseudorheumatoid hand deformity
  - C. Ulnar deviation
  - D. Swan neck deformity
  - E. Ankylosis of distal interphalangeal joints
  
3. Select common eye involvement in gout:
  - A. Scleritis
  - B. Episcleritis
  - C. Glaucoma
  - D. Is not characteristic
  - E. Cataracts
  
4. Select specific renal affectation in gout:
  - A. Mesangial glomerulonephritis
  - B. Focal proliferative glomerulonephritis
  - C. Renal cystic dysplasia
  - D. Nephrolithiasis
  - E. Nephrotic syndrome
  
5. What joint is most often affected in gout?
  - A. Distal interphalangeal joints
  - B. Proximal interphalangeal joints
  - C. Metacarpophalangeal joints
  - D. Knees
  - E. I Metatarsophalangeal joint
  
6. Muscle involvement found in gout is:
  - A. Spontaneous muscle pain
  - B. Not characteristic
  - C. Muscular atrophy
  - D. Muscular calcinosis
  - E. Intramuscular phlegmon

7. Primarily in the mechanism of gout flare appears:
- A. Initial involvement of endothelial cell
  - B. Penetration of urates in synovial fluid
  - C. Over secretion of fibronectine by fibroblasts
  - D. Fibroblast inhibition by mast cells
  - E. Monocytes inhibit fibrosis development
8. What pulmonary involvement may be present in patients with gout?
- A. Diffuse interstitial fibrosis
  - B. Is not characteristic
  - C. Reticular strips from the hill to the base
  - D. Honeycomb lung
  - E. Large round opacities
9. Diagnostic criteria for gout include:
- A. Limitation of movements in affected joints
  - B. Symmetric polyarthritis
  - C. Presence of tofi, containing uric acid microcrystals (microscopically confirmed)
  - D. Low back pain
  - E. Heel pain
10. Glucorticosteroids can be used in gout in case of :
- A. Pulmonary involvement
  - B. Pericardium involvement
  - C. Joint involvement refractory to NSAIDs and colchicine
  - D. Muscle involvement
  - E. Stomach involvement
11. Morphologic criteria in gout are considered:
- A. Nodules Aschoff
  - B. Nodules Osler
  - C. Rheumatoid nodules
  - D. Nodules Geberden
  - E. Tofi nodules

12. The following remedies are used in gout treatment, EXCEPT:
- A. Anti-inflammatory steroids
  - B. NSAIDs
  - C. Immunosuppressive drugs
  - D. Colchicine
  - E. Allopurinol
13. Gout nodules (tophi) are formations containing cell debris, leukocytes and:
- A. Collagen
  - B. Hydroxyapatites
  - C. Uric acid
  - D. Lipoproteins
  - E. Charcot- Leyden crystals
14. Hyperuricemia can be induced by the following factors, except:
- A. Furosemide
  - B. Methylprednisolone
  - C. Warfarin
  - D. Low-dose aspirin
  - E. Vitamin B12
15. Tofi appearance in gout is the result of increased level of:
- A. Factor Von Willenbrant
  - B. Rheumatoid factor
  - C. Hageman factor
  - D. Cholesterol
  - E. Serum uric acid
16. Joint paint in gout can be explained by:
- A. Synovium collagenosis
  - B. The degeneration of proteoglycans from joint cartilage
  - C. Deposition of uric acid crystals in joints
  - D. Deposition of apatite crystals in joints
  - E. Subchondral osteoporosis

17. Gout is a disease caused by hereditary or acquired abnormality of metabolism of:
- A. Carbohydrates
  - B. Purines
  - C. Hydrates
  - D. Electrolytes
  - E. Energy
18. What is the most common affected joint at the onset of gout?
- A. Wrist joint
  - B. I Metatarsophalangeal joint
  - C. Knees
  - D. Shoulders
  - E. Elbows
19. X-ray confirmed bone erosion "punched-out" is criteria for:
- A. Ankylosing Spondylitis
  - B. Systemic Lupus Erythematosus
  - C. Rheumatoid arthritis
  - D. Rheumatic fever
  - E. Gout
20. In classical way gout starts with:
- A. I MTF joint arthritis
  - B. Symmetric polyarthritis
  - C. Sacroiliitis
  - D. Temporo-mandibular joint involvement
  - E. Shoulder arthritis

## **Multiple choice**

21. What remedies are used for the treatment of acute gout flare:
- A. NSAIDs
  - B. Antibacterial drugs
  - C. Colchicine
  - D. Immune suppressors

E. Methylprednisolon

22. Which of the following statements regarding adverse effects of Allopurinol therapy are NOT CORRECT:

- A. Dyspepsia
- B. Hypotension
- C. Hypoacusis
- D. Thrombocytopenia
- E. Leukopenia

23. Which of the following criteria are included in the American College of Rheumatology diagnostic criteria for acute gout (2002):

- A. The presence of characteristic crystals of uric acid in synovial fluid
- B. Symmetrical arthritis: simultaneous bilateral involvement of the same joints lasting at least 6 weeks
- C. Joint inflammation which culminates in one day
- D. The presence of rheumatoid factor
- E. Radiographic changes demonstrating diffuse osteoporosis

24. Gout therapy includes:

- A. Diclofenac
- B. Colchicine
- C. Prednisone
- D. Azathioprine
- E. Allopurinol

25. Joint swelling in gout occurs due to:

- A. Microvascular lesions
- B. Synovia inflammation and synoviocytes proliferation
- C. Epiphyseal osteoporosis
- D. Increased vascular permeability with accumulation of synovial liquid rich in urates
- E. Articular cartilage damage

26. The most common sites of gouty nodules (tophi) are:

- A. Elbows
- B. Pleura
- C. Pericardium
- D. Lung parenchyma
- E. Ears

27. What changes are specific for chronic gouty arthritis?

- A. Polyarticular involvement
- B. Symmetric involvement
- C. Sacroiliac joint involvement
- D. Carpo-metacarpal joint involvement
- E. Deformities of foot “gouty feet”, hand deformities “pseudorheumatoid hand”

28. Uric acid depressive treatment in gout includes:

- A. D-penicillamine
- B. Colchicine
- C. Allopurinol
- D. Propranolol
- E. Febuxostat

29. Urolithic treatment in gout includes the administration of:

- A. D-penicillamine
- B. Colchicine
- C. Uricase
- D. Rasburicase
- E. Allopurinol

30. Which of the following systemic involvements are associated with poor prognosis in gout?

- A. Myocardial infarction
- B. Interstitial nephritis
- C. Arteriosclerosis with development of nephrosclerosis
- D. Hypertension
- E. Mesenteric arteritis

31. Neurological manifestations in patients with gout can be caused by:

- A. Atherosclerosis of cerebral vessels

- B. Dissecting popliteal cyst
- C. Paraparesis caused by tophi in extradural space or yellow ligaments
- D. Tarsal or carpal tunnel syndrome
- E. Vertebrobasilar insufficiency

32. For the diagnosis of gout essential investigations are:

- A. Electromyography
- B. Bone scintigraphy
- C. Microscopy of synovial fluid
- D. Computed tomography
- E. Uric acid assessment in blood serum and urine

33. What factors are considered to be involved in hyperuricemia development:

- A. Drug administration (diuretics, warfarine)
- B. Smoking
- C. Genetic defects of purine metabolism
- D. Diet with high purine level
- E. Abuse of ethanol

34. What uric acid values define hyperuricemia events?

- A. Serum uric acid 0.49 mmol / L for men
- B. Serum uric acid 0.39 mmol / L in women
- C. Serum uric acid 0.36 mmol / L for men
- D. Serum uric acid 0.30 mmol / L in women
- E. In urine uric acid 900 mg / 24 hours

35. What X-ray changes may be present in patients with gout:

- A. Soft tissue calcinosis
- B. Phalangeal osteolysis
- C. Marginal sclerosis
- D. Osteophytes
- E. Bone erosions "punched-out"

36. What changes may occur in the kidney of a patient with gout:

- A. Hyperplasia of intima of interlobular artery
- B. Fibrinoid necrosis of afferent artery
- C. Uric nephropathy
- D. Tophi in renal parenchyma
- E. Uric acid stones

37. Indicate pathological laboratory findings specific for gout:

- A. Hyperuricemia
- B. Hyperuricosuria
- C. Hypertransaminasemia
- D. Hypercomplementemia
- E. Hypertriglyceridemia

38. Which of the following are extra-articular gout manifestations?

- A. Pulmonary fibrosis
- B. Glomerulonephritis
- C. Hypertension
- D. Heart conductivity disturbances (AV block)
- E. Nephrolithiasis

39. Which of the following changes in laboratory data can be found in gout?

- A. Increase in erythrocyte sedimentation rate in most patients with active disease
- B. IgA serum levels are often elevated
- C. Increased serum uric acid level
- D. Antinuclear antibodies are constantly present
- E. Increased C-reactive protein in most patients with active disease

40. Intradermal tophi in gout are often located:

- A. On the chest
- B. In the region of the 1<sup>st</sup> carpo-metacarpal joint
- C. On the ulnar side of the forearm
- D. On buttocks
- E. In the region of olecranon bursa

41. Uricosuric gout treatment includes administration of:



- A. D-penicillamine
- B. Colchicine
- C. Azathioprine
- D. Benzbromarone
- E. Probenecid

42. Joint deformities specific for gout include the following, EXCEPT:

- A. Deformities of feet
- B. Deformities of fists - "pseudorheumatoid hand "
- C. Ulnar deviation of the fingers
- D. "Swan neck" deformity
- E. Shortening of distal phalanges

43. What joints are very rare affected in gout?

- A. Small hand joints
- B. Temporomandibular joints
- C. Knees
- D. Coxofemoral joints
- E. Feet joints

44. Cardiovascular system involvement in gout is represented by:

- A. Aortic sigmoid insufficiency
- B. Hypertension
- C. Mitral insufficiency
- D. Tricuspid insufficiency
- E. Atherosclerosis

45. Microcrystallines arthritis group includes the following diseases, EXCEPT:

- A. Gout
- B. Reactive Arthritis
- C. Psoriatic arthritis
- D. Arthropathy by hydroxyapatite
- E. Chondrocalcinosis

46. Skin involvement in gout includes the following:

- A. Subcutaneous tophi

- B. Bruising
- C. Telangiectasia
- D. Intra-dermal tophi
- E. Papules

47. Diagnostic criteria of gout are the following:

- A. Presence of urate crystals in the synovial fluid
- B. Conjunctivitis
- C. Glomerulonephritis
- D. More than one access of acute arthritis in history
- E. Asymmetric swelling of one joint

48. In gout occurrence the following factors play role:

- A. Infectious agents
- B. Metabolic abnormalities
- C. Genetic predisposition
- D. Alcohol abuse
- E. Atherosclerosis of coronary arteries

49. What remedies are used to treat acute gout access?

- A. NSAIDs
- B. Antibacterial
- C. Colchicine
- D. Immune suppressors
- E. Glucocorticosteroids

50. Contraindications to Allopurinol administration are:

- A. In children
- B. During lactation
- C. Hypertension
- D. Acute thrombophlebitis
- E. During pregnancy

# Systemic lupus erythematosus

## Single Choice

1. What is NOT characteristic for systemic lupus erythematosus?
  - A. Pneumonitis
  - B. Pericarditis
  - C. Endocarditis Libmann-Sacks
  - D. Eosinophilic endocarditis
  - E. Myocarditis
2. What hematologic abnormality is NOT characteristic for systemic lupus erythematosus?
  - A. Leukocytosis
  - B. Leucopenia
  - C. Hemolytic anemia
  - D. Thrombocytopenia
  - E. Increased erythrocyte sedimentation rate (ESR)
3. What heart valve is most frequently affected in systemic lupus erythematosus?
  - A. Aortic
  - B. Mitral
  - C. Tricuspid
  - D. Pulmonary
  - E. Mitral and tricuspid
4. Which of the following is the most characteristic for systemic lupus erythematosus?
  - A. Mitral insufficiency
  - B. Mitral stenosis
  - C. Aortic insufficiency
  - D. Aortic stenosis
  - E. Tricuspid insufficiency
5. The main urinary sign for lupus glomerulonephritis, according to diagnostic criteria, is:
  - A. Hematuria
  - B. Leukocyturia
  - C. Proteinuria
  - D. Uraturia
  - E. Bacteriuria
6. Which variant of lupus nephritis has the worst prognosis?
  - A. Minimal mesangial lupus nephritis
  - B. Mesangio – proliferative lupus nephritis
  - C. Inactive focal sclerotic lupus nephritis
  - D. Diffuse sclerotic (>90% sclerotic glomeruli) lupus nephritis
  - E. Membranous (proteinuria 3g/day) lupus nephritis

7. Lupus cells are:

- A. Macrophages, which have phagocytosed nuclei of degraded leukocytes
- B. Lymphocyte aggregates
- C. Mature polymorphonuclear cells, which have phagocytosed nuclei of degraded leukocytes
- D. Aggregates of nuclei of degraded leukocytes
- E. Degraded foamy cells

8. Which statement is characteristic for systemic lupus erythematosus?

- A. Serum IgG levels falls down
- B. Normal level of circulating immune complexes
- C. ANA titer rises
- D. Serum IgM levels falls down
- E. Positive anti-CCP antibodies

9. Positive diagnosis of systemic lupus erythematosus requires the presence of not less than how many ACR criteria?

- A. 3 criteria
- B. 4 criteria
- C. 6 criteria
- D. 8 criteria
- E. 11 criteria

10. Select the adequate dosage of corticosteroids for a patient with severe lupus nephritis:

- A. 0.1 – 0.5 mg/kg/day
- B. 0.75 mg/kg/day
- C. 1.0 – 2.0 mg/kg/day
- D. 3.0 – 4.0 mg/kg/day
- E. >4 mg/kg/day

11. What phenomenon is characteristic for systemic lupus erythematosus?

- A. Activation of T-helper lymphocytes
- B. Activation of T-suppressor lymphocytes
- C. Inhibition of B lymphocytes
- D. Activation of T-killer lymphocytes
- E. Activation of T-cytotoxic lymphocytes

12. The duration of corticosteroid treatment in systemic lupus erythematosus is:

- A. 1 month
- B. 3 – 6 months
- C. 1 year
- D. 2 years
- E. Lifelong

13. The most frequent cardiac involvement in systemic lupus erythematosus is:

- A. Myocarditis
- B. Lupus endocarditis
- C. Valvular disease
- D. Pericarditis
- E. Cardiac arrhythmias

14. The least toxic drug used in systemic lupus erythematosus is:
- A. Chlorambucil
  - B. Cyclophosphamide
  - C. Azathioprine
  - D. Methotrexate
  - E. Hydroxychloroquine
15. The most efficient drug used in the treatment of systemic lupus erythematosus is:
- A. Methotrexate
  - B. Cyclophosphamide
  - C. Azathioprine
  - D. Non-steroidal anti-inflammatory drugs
  - E. Corticosteroids
16. The most frequent manifestation of nervous system involvement in systemic lupus erythematosus is:
- A. Depression
  - B. Anxiety
  - C. Headache
  - D. Mild cognitive dysfunction
  - E. Psychosis
17. What patients carry a high risk for development of lupus nephritis?
- A. With recurrent urinary abnormalities
  - B. With increased titer of anti-dsDNA antibodies
  - C. With hypocomplementemia
  - D. With markedly increased ESR
  - E. With thrombocytopenia
18. The most frequent manifestation of cardiac lupus is:
- A. Myocarditis
  - B. Involvement of all valves
  - C. Libman – Sacks endocarditis
  - D. Myocardial infarction
  - E. Pericarditis
19. What antibodies have the highest incidence in systemic lupus erythematosus?
- A. Anti – centromere
  - B. Anti – Jo1
  - C. Anti-streptolysin O or S
  - D. Anti – hyaluronidase
  - E. Anti – dsDNA
20. The most characteristic skin manifestation in systemic lupus erythematosus is:
- A. Butterfly shaped malar rash
  - B. Discoid rash
  - C. Alopecia
  - D. Livedo reticularis

- E. Raynaud phenomenon

## Multiple choice

21. Triggering factors in systemic lupus erythematosus can be:

- A. Genetic predisposition
- B. Acute viral infections
- C. Ultraviolet rays
- D. Endocrine imbalances (hyperestrogenemia and hypoandrogenemia)
- E. Plants' pollen

22. The following muco – cutaneous involvements are included in the diagnostic criteria for systemic lupus erythematosus (ACR, 1997):

- A. Malar rash
- B. Discoid rash
- C. Photosensitivity
- D. Type “erythema nodosum” rash
- E. Oral ulcers

23. The following organic involvements are included in the diagnostic criteria for systemic lupus erythematosus (ACR, 1997):

- A. Non – erosive arthritis
- B. Pleurisy, pericarditis
- C. Peripheral lymphadenopathy
- D. Renal involvement
- E. Neurological involvement

24. Joint involvement in systemic lupus erythematosus is characterized by:

- A. Polyarthritis
- B. Mainly small joints are involved
- C. Prolonged morning stiffness
- D. Symmetrical joint involvement
- E. Relatively rapid effect after corticosteroids administration

25. Select the characteristic signs for lupus pleurisy:

- A. Exudate
- B. Transudate
- C. Negative BAAR reaction
- D. Rarely lupus cells can be found
- E. Small amount of pleural fluid

26. Pleuro-pulmonary manifestations in systemic lupus erythematosus are characterized by:

- A. Pneumonitis
- B. Pleurisy
- C. Lobar pneumonia
- D. Pulmonary vasculitis
- E. Obstructive respiratory failure

27. The following factors can trigger recurrences in systemic lupus erythematosus:
- A. Corticosteroid treatment
  - B. Acute viral infections
  - C. Sun exposure
  - D. Intoxications with chemical compounds
  - E. Physical and psycho-emotional overload
28. The treatment of systemic lupus erythematosus has the following objectives:
- A. Improvement of clinical manifestations
  - B. Improvement of hematological abnormalities
  - C. Control of immunological abnormalities
  - D. Urgent surgical interventions
  - E. Prevention of hemostatic disorders
29. Neurological manifestations in systemic lupus erythematosus are characterized by:
- A. Polyneuropathy
  - B. Hemiparesis
  - C. Convulsions
  - D. Pseudoepilepsy
  - E. Normal electroencephalogram
30. Antiphospholipid syndrome in systemic lupus erythematosus is characterized by:
- A. Recurrent spontaneous abortions
  - B. False positive syphilis test
  - C. Arterial and venous thromboses
  - D. Increased anticardiolipin IgG or IgM antibodies titer
  - E. Decreased anti-dsDNA antibody titer
31. The following statements regarding antibodies in systemic lupus erythematosus are true:
- A. Antinuclear antibody (ANA) titer is increased
  - B. Anti-dsDNA antibody titer is increased, is frequently associated with lupus nephritis
  - C. Anti-Ro (SSA) antibodies appear in Sjögren syndrome and neonate lupus
  - D. Marker antibodies for systemic lupus erythematosus are anti-dsDNA and anti-Sm antibodies
  - E. Anti-histone antibodies are not associated with drug induced lupus
32. Which of the following statements regarding musculo-skeletal involvement in systemic lupus erythematosus are true?
- A. Osteoporosis is not characteristic for systemic lupus erythematosus
  - B. There is a proportional relationship between joint manifestations and the degree of activity in systemic lupus erythematosus
  - C. Articular deformities are not characteristic for systemic lupus erythematosus
  - D. Aseptic necrosis of joint structures can be a result of a prolonged corticosteroid treatment
  - E. Phalangeal “swan – neck” type deformities are found frequently
33. Characteristic pleuro – pulmonary manifestations in systemic lupus erythematosus are:
- A. Allergic alveolitis

- B. Pneumonitis
- C. Pleurisy
- D. Bacterial broncho-pneumonia
- E. Fungal pneumonia

34. Lupus pericarditis manifestations are:

- A. Intra-pericardial build-up of large quantities of fluid
- B. Pericardial fluid contains  $> 20000$  leukocytes/mm<sup>3</sup>
- C. Pericardial fluid contains circulating immune complexes
- D. Pericardial fluid has yellow – green color
- E. Evolves into constrictive pericarditis

35. Hematological abnormalities in systemic lupus erythematosus are the following:

- A. Leukocytosis
- B. Leukopenia
- C. Thrombocytosis
- D. Thrombocytopenia
- E. Lymphocytosis

36. High doses of corticosteroids in systemic lupus erythematosus are prescribed in the following cases:

- A. Skin involvement
- B. Mucosal and skin involvement
- C. Marked activity of the lupic process
- D. Presence of signs of generalized vasculitis
- E. Presence of marked nephrotic syndrome

37. What cytostatics are more frequently used in systemic lupus erythematosus?

- A. Methotrexate
- B. Azathioprine
- C. Vincristine
- D. Cyclophosphamide
- E. Myclosan

38. Factors that aggravate the prognosis in systemic lupus erythematosus are:

- A. Lupus endocarditis and valve disorders
- B. Joint involvement
- C. Renal involvement
- D. Skin and joint involvement
- E. Neurological involvement

39. The following conditions can be complications of pulse – therapy in systemic lupus erythematosus:

- A. Increased blood pressure
- B. Myopathy
- C. Seisures
- D. Peripheral tissue edema
- E. Worsening of systemic lupus erythematosus evolution



40. Select the most frequent manifestations of diffuse lupus myocarditis:

- A. Tachycardia
- B. Extrasystolia
- C. Heart failure
- D. Myocardial infarction
- E. Stroke

41. Which of the following are characteristics of antiphospholipid syndrome in systemic lupus erythematosus?

- A. Increase in urea level
- B. Increase of serum lipids
- C. Positive lupus anticoagulant
- D. Increase in anticardiolipin antibody titer
- E. False – positive Wasserman reaction

42. Select the manifestations of gastrointestinal tract involvement in systemic lupus erythematosus:

- A. Esophagitis
- B. Gastritis
- C. Gastro-duodenal ulcer
- D. Pancreatitis
- E. Crohn's disease

43. Select manifestations of systemic lupus erythematosus that can be treated with non-steroidal anti-inflammatory drugs:

- A. Renal involvement
- B. Serositis
- C. Nervous system involvement
- D. Joint involvement
- E. Fever

44. Which statements regarding systemic lupus erythematosus are true?

- A. Anemia and leukopenia are found in the majority of patients with systemic lupus erythematosus
- B. Hemolytic anemia is treated with high doses of corticosteroids
- C. Severe leukopenia is associated with recurrent infections
- D. Severe thrombocytopenia is associated with bleeding
- E. Leukopenia demands cytostatic treatment

45. Choose correct statements regarding pregnancy in systemic lupus erythematosus:

- A. Increased risk for spontaneous abortion
- B. Is contra-indicated in women with lupus nephritis
- C. High doses of corticosteroids can induce fetal malformations
- D. Newborns of women with systemic lupus erythematosus are hypotrophic
- E. Women with history of spontaneous abortions can be treated with high doses of corticosteroids

46. Glucocorticoid treatment in systemic lupus erythematosus includes:

- A. Doses of 1 -2 mg/kg/day divided in multiple administrations, when the disease is active

- B. Single morning maintenance dose
  - C. The treatment is associated with a cytostatic
  - D. Pulse-therapy with methylprednisolone is used in cases of lupus glomerulonephritis
  - E. Corticotherapy is used in systemic lupus erythematosus with cutaneous and joint involvements
47. The treatment of systemic lupus erythematosus with cytostatics aims:
- A. Control of active disease
  - B. Complete replacement of corticosteroids, which have a lot of side effects
  - C. Prevention of hematologic complications
  - D. Reduction of number of flares of systemic lupus erythematosus
  - E. Decrease of the risk of end stage chronic kidney disease
48. The tests for diagnosis of systemic lupus erythematosus include the assessment of:
- A. Anti-dsDNA titer
  - B. ANA titer
  - C. Anti-Sm titer
  - D. Anti-SSA (Ro) or anti-SSB (La) titer
  - E. Coombs test
49. Cytostatic immunosuppressive drugs recommended in the treatment of systemic lupus erythematosus are:
- A. Cyclophosphamide
  - B. Methotrexate
  - C. Azathioprine
  - D. Mofetil mycophenolate
  - E. Vincristine
50. The maintenance of remission treatment of systemic lupus erythematosus includes:
- A. Prednisolone 20 – 30 mg/day
  - B. Prednisolone 5 – 10 mg/day
  - C. Methotrexate 7.5 – 20 mg/week
  - D. Methotrexate 15 mg/week
  - E. Cyclophosphamide 1.0 grams i/v once every 2 – 3 months

## Osteoarthritis

### Single Choice

1. The region of Bouchard nodules development in osteoarthritis is:
- A. Proximal interphalangeal joints
  - B. Distal interphalangeal joints
  - C. Knee joint
  - D. Elbow joint
  - E. Metatarsophalangeal joints

2. What laboratory indexes are characteristic for osteoarthritis?
  - A. Anemia
  - B. Leukocytosis
  - C. Leukopenia
  - D. Thrombocytosis
  - E. Normal indexes
3. What joint involvement is not characteristic for primary generalized osteoarthritis?
  - A. Proximal interphalangeal joints
  - B. Distal interphalangeal joints
  - C. Wrist joints
  - D. Knee joints
  - E. Hip joints
4. Choose chondroprotective drug used in osteoarthritis:
  - A. Diclofenac
  - B. Indomethacine
  - C. Glucosamine
  - D. Cyclophosphamide
  - E. Hydroxychloroquine
5. What drug is used for viscosupplementation in osteoarthritis?
  - A. Hyaluronic acid
  - B. Ursodesoxycholic acid
  - C. Aminocapronic acid
  - D. Acidolactic acid
  - E. Malonic acid
6. Morning stiffness in osteoarthritis lasts:
  - A. 5 -30 minutes
  - B. 30 minutes – 1 hour
  - C. 1 – 2 hours
  - D. 2 – 5 hours
  - E. All day long
7. What are metalloproteinases?
  - A. Cathepsins
  - B. Physiological tissue inhibitors
  - C. Proteolytic systems produced by the chondrocyte
  - D. Growth factors, implicated in cartilage homeostasis
  - E. Cytokines with an essential role in the normal metabolism of cartilaginous tissue
8. Kellgren – Lawrence (1957) stage I of osteoarthritis has the following characteristics:
  - A. The absence of modifications
  - B. Moderate joint space narrowing, multiple osteophytes
  - C. Uncertain X-ray changes
  - D. Advanced changes (practically absent joint space, massive osteophytes)
  - E. Minimal changes – minimal joint space narrowing, a few osteophytes
9. Kellgren – Lawrence (1957) stage III of osteoarthritis has the following characteristics:

- A. The absence of modifications
- B. Moderate joint space narrowing, multiple osteophytes
- C. Uncertain X-ray changes
- D. Advanced changes (practically absent joint space, massive osteophytes)
- E. Minimal changes – minimal joint space narrowing, a few osteophytes

10. Nodular osteoarthritis has the following characteristics:

- A. Diffuse osteoporosis
- B. Presence of Heberden and Bouchard nodules
- C. Ulnar deviation
- D. Baker's cyst
- E. Knee joint deformities

11. What joint is rarely affected in osteoarthritis?

- A. Ankle joint
- B. Sacrococcygeal joint
- C. Knee joint
- D. Shoulder joint
- E. Hip joint

12. Factor that influences the intensity of pain in osteoarthritis is:

- A. The stage of X-ray changes
- B. Patient's gender
- C. Environmental factors
- D. Infectious factors
- E. Season

13. Synovitis in osteoarthritis occurs more frequently in:

- A. Hip joints
- B. Small joints of the hand
- C. Knee joints
- D. Ankle joints
- E. Shoulder joints

14. The degenerative process in osteoarthritis is characterized by:

- A. Usually leads to ankyloses
- B. Has a rapid evolution
- C. Has a slow, insidious evolution
- D. The onset is usually acute, presenting with synovitis
- E. Presents with progressive inflammation

15. Secondary hip osteoarthritis is characterized by:

- A. Is usually unilateral
- B. Is usually bilateral
- C. Is strictly symmetrical
- D. The disease onset is usually with associated homolateral knee osteoarthritis
- E. The disease onset is usually with associated spinal column osteoarthritis

16. Choose the characteristic deformity in hand osteoarthritis:

- A. “Boutonniere” deformity
  - B. Ulnar deviation of fingers
  - C. “Swan-neck” deformity
  - D. Heberden and/or Bouchard nodules
  - E. “Camel-back” deformity
17. Bouchard nodules are localized at the level of:
- A. Proximal interphalangeal joints of the upper extremities
  - B. Proximal interphalangeal joints of the lower extremities
  - C. Knee joints
  - D. Elbow joints
  - E. Shoulder joints
18. What joint are predominantly affected in hand osteoarthritis?
- A. Cubitocarpal joints
  - B. II and III metacarpophalangeal joints
  - C. IV metacarpophalangeal joints
  - D. Radiocarpal joints
  - E. Risomelic joint of the thumb
19. Drugs with pathogenetic action in the treatment of osteoarthritis are:
- A. Slow – acting symptomatic anti – osteoarthritis drugs.
  - B. Short – acting symptomatic treatment
  - C. Analgesics
  - D. Non-steroidal anti-inflammatory drugs
  - E. Bisphosphonates
20. Which of the following non-steroidal anti-inflammatory drugs have a negative influence on the cartilage metabolism?
- A. Diclofenac
  - B. Nimesulide
  - C. Meloxicam
  - D. Etoricoxib
  - E. Piroxicam

## Multiple choice

21. What are the characteristic clinical manifestations in osteoarthritis?
- A. Mechanical pain
  - B. Joint crepitation
  - C. Local hyperthermia
  - D. Local edema
  - E. Skin hyperpigmentation in the affected joint region
22. Which of the following X-ray manifestations are characteristic for osteoarthritis:
- A. Osteoporosis

- B. Multiple joint surface erosions
  - C. Osteophytes
  - D. Joint space narrowing
  - E. Subchondral osteosclerosis
23. Choose risk factors for primary osteoarthritis:
- A. Genetic predisposition
  - B. Age
  - C. Sex
  - D. Obesity
  - E. Trauma
24. Osteoarthritis is manifested macroscopically by:
- A. Chondromalacia
  - B. Fibrillation
  - C. Fissuration
  - D. Exulceration
  - E. Aseptic necrosis
25. What factors contribute to the onset of pain in osteoarthritis?
- A. Mechanical factors
  - B. Bone factors
  - C. Synovial factors
  - D. Muscular factors
  - E. Cartilage factors
26. Osteoarthritis frequently presents with congestive flares triggered by:
- A. Detached cartilage fragments that migrate in the joint cavity
  - B. Articular mice
  - C. Hydroxyapatite crystal precipitation
  - D. Calcium pyrophosphate crystal precipitation
  - E. Muscle atrophies
27. Synovitis in osteoarthritis is characterized by:
- A. Worsening of pain
  - B. Local hyperthermia
  - C. Local hypothermia
  - D. Exudative reaction
  - E. Increase in synovial fluid quantity
28. Risk factors for osteoarthritis are:
- A. Continuous micro-traumatization of the joint
  - B. Hypermobility syndrome
  - C. Chronic beta-hemolytic streptococcal infection
  - D. Genetic predisposition
  - E. Obesity
29. At the base of osteoarthritis pathogenesis stay:
- A. Structural collagen defects

- B. Metabolic cartilage changes
  - C. Mechanisms of inflammatory processes
  - D. Degenerative process secondary to microcrystalline arthritis
  - E. Chronic autoimmune inflammatory process
30. Hereditary character of osteoarthritis is more characteristic for:
- A. Nodular hand osteoarthritis
  - B. Spinal column osteoarthritis
  - C. Knee osteoarthritis
  - D. Hip osteoarthritis
  - E. Shoulder osteoarthritis
31. What changes take place at bone level in osteoarthritis?
- A. Osteoporosis
  - B. Subchondral osteocondensation
  - C. Osteophyte development
  - D. Bone cyst formation
  - E. Syndesmophyte development
32. Secondary osteoarthritis includes the following:
- A. Post-traumatic osteoarthritis
  - B. Osteoarthritis secondary to congenital joint diseases
  - C. Osteoarthritis secondary to inflammatory joint diseases
  - D. Nodular hand osteoarthritis
  - E. Osteoarthritis in metabolic diseases
33. The features of pain in osteoarthritis are:
- A. Inflammatory type pain
  - B. Mechanical type pain
  - C. Pain during rest which is relieved during motion
  - D. Physical rest does not decrease the pain
  - E. "Starting" pain
34. Knee osteoarthritis has the following characteristics:
- A. Mechanical type pain
  - B. Functional limitations
  - C. Morning stiffness > 30 minutes
  - D. Morning stiffness < 30 minutes
  - E. Crepitation
35. What joint structures are involved in the mechanism of pain production in osteoarthritis:
- A. Joint capsule
  - B. Synovium
  - C. Periosteum
  - D. Bone
  - E. Cartilage
36. What are usually the first symptoms pointing out to osteoarthritis?
- A. Pain that relieves during rest

- B. Joint swelling
- C. Crepitation
- D. Pain at motion
- E. Posture changes

37. The factors which promote joint mobility limitation in osteoarthritis are:

- A. Pain
- B. Osteophyte development
- C. Crepitation
- D. Joint capsule thickening
- E. Baker's cyst

38. Clinical signs of advanced knee osteoarthritis are:

- A. "Varus" joint deformity
- B. "Valgus" joint deformity
- C. Chronic synovitis
- D. Joint instability
- E. Baker's cyst

39. In what localization of osteoarthritis disease progression is quicker and more severe:

- A. Knee osteoarthritis
- B. Hip osteoarthritis
- C. Hand osteoarthritis
- D. Uncovertebral osteoarthritis
- E. Shoulder osteoarthritis

40. The characteristics of mechanical pain are:

- A. Intensifies at night, closer to morning hours
- B. Tendency to relief during physical rest
- C. Association with morning stiffness lasting > 1 hour
- D. Usually appears as a result of previous trauma
- E. Appears at joint movement

41. Primary hip osteoarthritis is characterized by:

- A. Develops over a preceding cause
- B. Has no risk factors
- C. Is determined by the existence of previous traumas
- D. Has a hereditary aspect
- E. Has a post-traumatic aspect

42. The pain in hip osteoarthritis is characterized by:

- A. Onset of pain during walking
- B. Is relieved in standing position
- C. Is relieved by rest
- D. Is not determined by radiological stage
- E. Intensifies in the second half of the night

43. Final stage knee osteoarthritis is characterized by:

- A. The pain is present only at night



- B. The pain is present only during exercise
- C. Pain appears during stair climbing
- D. Pain appears both at climbing and going down the stairs
- E. Is associated with severe mobility impairment

44. In knee osteoarthritis the following activities are not recommended:

- A. Ground activities
- B. Aquatic activities
- C. Squats
- D. Prolonged walking on irregular terrain
- E. Jumps

45. Which of the following are diagnostic criteria for hand osteoarthritis, developed by the American College of Rheumatology?

- A. Symmetric involvement of affected joints
- B. Hard tissue enlargement in at least 2 out of 10 selected joints
- C. Radiological changes presenting diffuse osteoporosis
- D. Morning stiffness more than 1 hour
- E. Pain and/or stiffness in the hand joints during most of the days in the last month

46. Which of the following are the components of the diagnostic criteria for knee osteoarthritis (ACR):

- A. Mechanical pain in the knee joint
- B. Presence of Baker's cyst
- C. Crepitation on active movements
- D. Age less than 50 years
- E. Joint osteophytes (clinic and on X-ray)

47. Which of the following instrumental investigations are useful in the diagnosis of osteoarthritis:

- A. X-ray
- B. Osteodensitometry
- C. DXA
- D. MRI
- E. Arthroscopy

48. Kinetotherapy in osteoarthritis promotes:

- A. Prevention of periarticular muscle atrophy
- B. Restoration of the intraarticular cartilage thickness
- C. Prevention of the instability of the affected joint
- D. Disappearance of inflammation
- E. Cessation of deformity development

49. Drugs with "rapid" action, used in the treatment of osteoarthritis are:

- A. Hyaluronic acid
- B. Non-opioid analgesics
- C. Non-steroidal anti-inflammatory drugs
- D. Glucosamine
- E. Chondroitin – sulphate

50. Which of the following instrumental investigations are used to visualize joint cartilage?
- A. X-ray examination
  - B. Ultrasound examination
  - C. Technetium skeletal scintigraphy
  - D. CT imaging
  - E. Arthroscopy

## Osteoporosis

### Single Choice

1. Osteoporosis is defined as a T-score on DXA lower than:
  - A. 1.0 standard deviations (SD)
  - B. 1.1 standard deviations (SD)
  - C. -1.5 standard deviations (SD)
  - D. -2.0 standard deviations (SD)
  - E. -2.5 standard deviations (SD)
2. The assessment of major osteoporotic fracture risk is done using:
  - A. Physical examination
  - B. FRAX tool
  - C. DXA
  - D. Ultrasound densitometry
  - E. Radiological exam
3. Choose clinical manifestation of osteoporosis:
  - A. Fever
  - B. Fragility fractures
  - C. Pain during bone percussion
  - D. Tetany
  - E. Marked weakness
4. A T-score of -1.1 SD on DXA in a 65-year old patient is defined as:
  - A. Normal values
  - B. Osteopenia
  - C. Osteoporosis
  - D. Severe osteoporosis
  - E. Increased value
5. The daily necessity of Vitamin D in a person older than 50 years is:
  - A. 600 IU
  - B. 700 IU
  - C. 800 IU
  - D. 900 IU
  - E. 1000 IU
6. The mechanism of action of denosumab is:

- A. Tumor necrosis factor- $\alpha$  blocker
  - B. IL-1 antagonist
  - C. RANKL inhibitor
  - D. RANKL action modulator
  - E. Osteoprotegerin antagonist
7. T-score in Dual-energy X-ray Absorptiometry represents:
- A. Total bone mass
  - B. The risk for fragility fractures in the next 10 years, presented in percent
  - C. The number of standard deviations of the bone mineral density (BMD) compared with values in a healthy young subject
  - D. The number of standard deviations of the bone mineral density (BMD) compared with values in a healthy subject of the same age and sex
  - E. Irradiation dose used
- 8 Z-score in Dual-energy X-ray Absorptiometry is:
- A. Total bone mass
  - B. The risk for fragility fracture in the next 10 years, presented in percent
  - C. The number of standard deviations of the bone mineral density (BMD) compared with values in a healthy young subject
  - D. The number of standard deviations of the bone mineral density (BMD) compared with values in a healthy subject of the same age and sex
  - E. Irradiation dose used
9. Select, which of the following can be a localization of major osteoporotic fractures:
- A. Clavicle
  - B. Calcaneus
  - C. Mandible
  - D. Proximal third of the femur
  - E. Sternum
10. Indicate the remedy to be used in the treatment of osteoporosis:
- A. Osteoprotegerin
  - B. Phosphocalcin
  - C. Alendronate
  - D. Pituitrin
  - E. Vasopressin
11. To diagnose osteoporosis in premenopausal women the following data are used:
- A. T-score, with final values adjustment
  - B. Z-score
  - C. X-score
  - D. FRAX tool
  - E. Bone mineral density
12. Select the risk factor for osteoporosis development:
- A. Repeated exposition to the sun
  - B. Decreased body mass index (BMI)
  - C. Intense physical exercise

- D. Excessive ionizing radiation exposure
  - E. Adequate vitamin D supplementation
13. The risk of 10-year fracture probability is assessed using:
- A. Ultrasound densitometry
  - B. DXA
  - C. FRAX tool
  - D. One minute screening-test
  - E. X-ray

## Multiple choice

14. Non-pharmacological measures in the treatment of osteoporosis are:
- A. Adequate physical exercise
  - B. Smoking cessation, alcohol and coffee use reduction
  - C. Physical exercise reduction
  - D. Fall prevention
  - E. Body weight reduction
15. Select the groups of medicines used in the treatment of osteoporosis:
- A. Selective estrogen receptor modulators
  - B. Oral and local chondroprotectors
  - C. Non-steroidal anti-inflammatory drugs
  - D. Biological agents (RANKL inhibitors)
  - E. Bisphosphonates
16. Select the modifiable risk factors in osteoporosis:
- A. Female sex
  - B. Insufficient calcium intake
  - C. Age > 65 years
  - D. Vitamin D deficiency
  - E. Smoking
17. Select correct statements referring to bisphosphonates:
- A. Also have an anabolic effect on the bone
  - B. Cumulate intensely in bone tissue and inhibit osteoclast function
  - C. Fewer number and lower activity of bone remodeling units are observed at the tissue level
  - D. Low bioavailability in oral use
  - E. Are the first-line agents in the treatment of osteoporosis
18. Select the bisphosphonates used in the modern treatment of osteoporosis:
- A. Alendronate
  - B. Etidronate
  - C. Zolendronate
  - D. Clodronate
  - E. Ibandronate

19. The fracture risk calculation using tool FRAX takes into consideration:
- A. Positive history of parental hip fracture
  - B. Anthropometric data
  - C. Menopause duration
  - D. Secondary osteoporosis possible causes
  - E. Bone mineral density
20. What statements referring to peak bone mass are correct?
- A. Is defined as the bone mass accrued during organism growth
  - B. Genetic factors play the main role
  - C. Is obtained in the third decade of life
  - D. Depends only on environmental factors
  - E. Is usually lower in males
21. Select correct statements referring to Denosumab:
- A. Is a biological agent
  - B. Can be used as a first-line agent in the treatment of osteoporosis
  - C. Increased compliance due to a comfortable regimen of administration
  - D. Low rate of adverse reactions
  - E. Contraindicated in the postmenopausal period
22. Select the causes of secondary osteoporosis:
- A. Rheumatoid arthritis
  - B. Long term corticosteroid use
  - C. Alcohol abuse
  - D. Osteoarthritis
  - E. Type I diabetes mellitus
23. Risk factors for the development of primary osteoporosis are:
- A. Genetic statute
  - B. Age
  - C. Body mass index  $> 25$
  - D. Alcohol abuse
  - E. Regular physical exercise
24. Osteoclast activation is stimulated by:
- A. RANKL
  - B. Osteoprotegerin
  - C. Parathormone
  - D. IL-1, IL-6
  - E. Testosterone
25. Select correct statements referring to osteoporosis:
- A. Its incidence rises with age
  - B. Men are affected more often
  - C. Early diagnosis is established with the help of plain X-ray
  - D. Bone mineral density increases

- E. Fragility fractures represent clinical expression of the disease
26. Osteoporosis can clinically manifest with:
- A. Worsening of thoracic kyphosis
  - B. Pain along vertebral column
  - C. Joint swelling
  - D. Height reduction of 2,5 cm for one year
  - E. Ferrum deficiency anemia
27. Select correct statements referring to vertebral fractures in osteoporosis:
- A. In the majority of cases patients can identify the moment of the fracture
  - B. The pain can be of low intensity
  - C. Untreated, the pain usually subsides in 2 – 6 weeks
  - D. Can lead to thoracic deformities, height reduction
  - E. Can be treated with injections of polymethylmethacrylate in vertebral bodies
28. The phases of the bone remodeling cycle are:
- A. Induction
  - B. Activation and resorption
  - C. Inversion and bone formation
  - D. Mineralization
  - E. Constitution
29. Select the vertebral deformities in osteoporosis:
- A. Wedge
  - B. Concave and biconcave
  - C. Crush
  - D. Deltoid
  - E. Pseudoconcave
30. Bone resorption markers are:
- A. Collagen type I telopeptides
  - B. Arginine
  - C. Hydroxyproline
  - D. Osteonectin
  - E. 5p tartrate resistant acid phosphatase
31. Typical localizations of fractures in osteoporosis are:
- A. Proximal femur
  - B. Vertebral column
  - C. Ribs
  - D. Distal 1/3 of radius
  - E. Proximal humerus
32. Increased bone resorption occurs due to:
- A. Decreased intestinal absorption of calcium
  - B. Increased renal calcium excretion
  - C. Decreased renal calcium excretion
  - D. Increased parathormone activity

E. Reduction of estrogen production

33. Dual-energy X-ray absorptiometry can be used for:

- A. Diagnosis of osteoporosis
- B. Determination of bone turnover
- C. Risk assessment of fracture
- D. 10-year fracture risk assessment
- E. Monitoring of the response to the treatment

34. What remedies may contribute to bone formation?

- A. Parathyroid hormone
- B. Vitamin D
- C. L-tyrosine
- D. Anabolic steroids
- E. Glucocorticosteroids

35. Decrease of bone formation occurs due to:

- A. Decrease in protein synthesis
- B. Growth factors level reduction
- C. Decrease in the number of osteoblasts
- D. Decrease in the number of osteoclasts
- E. Increased collagen synthesis