

16. Pain in the extremities. Carrying out differential diagnosis of vascular diseases, lesions of the nervous system and pathology of the musculoskeletal system*

1. A 20-year-old patient was delivered to the hospital in summer from the street with haemorrhage from the brachial artery. First medical aid involved application of a tourniquet for provisional arrest of bleeding. What is the maximal exposure of the tourniquet?
 - A. **120 minutes**
 - B. 60 minutes
 - C. 180 minutes
 - D. 15 minutes
 - E. 30 minutes

2. If a child has adherent fingers on his right hand, then what will be your diagnosis?
 - A. **Syndactyly**
 - B. Ectrodactyly
 - C. Ectromelia
 - D. Polydactyly
 - E. Macrodactyly

3. A 34-year-old patient was bitten by a dog 3 hours ago. There is a wound by dog teeth without bleeding in the left arm. What surgical help would you provide to this patient?
 - A. **Clean wound with detergent water and apply anti-septic**
 - B. Aseptic bandage
 - C. Complete suture of the wound
 - D. Incomplete suture of the wound
 - E. Cream bandage

4. A 22 year old patient was admitted to trauma center with complaints of pain in the left ankle joint that was getting worse during moving and weight bearing. On the clinical examination it was found that the patient had the closed fracture of medial malleolus without displacement. In which position should the foot be fixed in plaster cast?
 - A. **At right angle with varus positioning of the foot**
 - B. In position of planter flexion of foot
 - C. In position of supination
 - D. In position of dorsal flexion of foot
 - E. In position of pronation

5. The 67 y.o. patient had 5 recurrent fractures of the lower extremities without considerable cause within 5 years. O-shaped deformity of the legs in the knee joints has appeared. The skull, pelvis and lower extremities X-Ray shows the thickening of flat bones. In the long bones there is a hyperostosis along the bone

axis. The blood test has not revealed any inflammation activity. Serum calcium is normal. What disease do you consider in this case?

- A. **Pagets disease**
- B. Hyperparathyroid dystrophy
- C. Myeloma
- D. Mottled disease (marble disease)
- E. Chronic osteomyelitis

6. A 24-year-old patient got a puncture injury below the Poupart's ligament accompanied by intense arterial bleeding. The best method to temporarily stop the bleeding in the patient would be:

- A. **Compression band**
- B. Maximum limb bending
- C. Esmarch's tourniquet
- D. Compressing a blood vessel with a clamp
- E. Wound suturing

7. An emergency team delivered a 83-year-old patient complaining of inability of her right leg to support the body after falling on her right side. Objectively: the patient lies on a gurney, her right leg is rotated outwards, the outside edge of foot touches the bed. There is positive straight leg raising sign. What is your provisional diagnosis?

- A. **Femoral neck fracture**
- B. Femoral diaphysis fracture
- C. Hip joint contusion
- D. Cotyloid cavity fracture
- E. Hip dislocation

8. A 27-year-old patient was brought to clinic with a crashed wound of the posterior surface of the right shin in 2 hours after the accident happened. During surgical treatment pieces of dirty clothes and gravel were removed. What actions from the given below are the decisive ones to prevent an anaerobic infection?

- A. **Radical surgical treatment**
- B. Introduction of the medical dose of the anti-gangrene serum
- C. Hyperbaric oxygenation
- D. Rational antibiotic therapy

Introduction of the preventive dose of an anti-gangrene serum

9. A patient, aged 58, was fishing in the winter. On return home after some time felt some pain in the feet. Consulted a doctor. On examination: feet skin was pale, then after rewarming became red, warm to the touch. Edema is not significant, limited to the toes. All types of sensitivity are preserved. No blisters. What degree of frostbite is observed?

- A. **I degree**
- B. III degree
- C. II degree
- D. IV degree

E. V degree

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

A. Iliac dislocation of hip

B. Femoral neck fracture with a displacement

C. Inferoposterior dislocation of hip

D. Pertrochanteric fracture of hip

E. Cotyloid cavity fracture with a central dislocation of hip

11. An unconscious victim in severe condition is brought to clinic. It is known that the patient touched the bare wire with his hand and during 5 minutes was under the influence of an alternating current with voltage of 220 V. Physical exam: skin is pale, cold by touch. Breath is weakened, BP - 90/50 mm Hg, Ps - 60 bpm, arrhythmical. There are fields of necrosis of the skin on the right hand and on the right foot. What is the preliminary diagnosis?

A. Electroburn of the right foot and right hand

B. High voltaged electroburn of the right foot and shank

C. Electrotrauma, acute cardiovascular failure

D. Vascular collapse due to electric current lesion

12. A man with a stab-wound of the right foot applied to doctor. He stepped on the board with nail two hours ago. In the patient medical chart it is stated that 3 years ago he passed the whole course of vaccination against tetanus. What is the tactics of doctor to prevent tetanus in this case?

A. Do not conduct specific prophylaxis

B. Administer 1,0 ml of tetanus toxoid

C. Administer 1 ml tetanus toxoid and 3000 U of anti-tetanic serum

D. Administer 3000 U of anti-tetanic serum

E. Administer 0,5 ml of tetanus toxoid

13. After a car accident a 37-year-old patient has an acute pain and bleeding in the middle third of his right thigh. Objectively: there is a wound on the anterior surface of the right thigh with massive bleeding, abnormal mobility at the level of the middle third of the thigh. The first aid is to be started with:

A. Digital occlusion of the femoral artery

B. Venipuncture and intravenous infusion of polyglycine

C. Tourniquet application

D. Injection of pain-killers

E. Immobilization of the extremity with a transportation splint

14. A 42-year-old builder consulted a doctor about a foot injury with a nail that he got in the morning of the same day. The wound was washed with water. Three years ago he was vaccinated against tetanus. Examination established satisfactory condition of the patient. The left foot was slightly edematic, there was a stab wound on the sole. In order to prevent tetanus it is primarily required to:

- A. Give an intravenous injection of 0,5 ml of tetanus anatoxin**
 B. Administer a course of antibiotic therapy
 C. Give an intravenous injection of 3000 IU of antitetanus serum
 D. Give an intravenous injection of 1 ml of tetanus anatoxin, 3000 IU of antitetanus serum
 E. Treat the wound with suds
15. A patient with frostbite of both feet was delivered to the admission ward. What actions should be taken?
A. To apply a bandage, to introduce vasodilating medications
 B. To administer cardiac medications
 C. To rub feet with snow
 D. To apply an alcohol compress
 E. To put feet into hot water
16. 10 years ago a patient had a fracture in the middle one-third of his left femoral bone, and during the last 7 years he has been having acute inflammation in the area of old fracture accompanied by formation of a fistula through which some pus with small fragments of bone tissue is discharged. After a time the fistula closes. What complication of the fracture is it?
A. Chronic osteomyelitis
 B. False joint
 C. Trophic ulcer
 D. Bone tuberculosis
 E. Soft tissue phlegmon
17. A 17-year-old patient complains of pain in the area of the left knee joint. Soft tissues of thigh in the affected region are infiltrated, joint function is limited. X-ray picture of the distal metaepiphysis of the left femur shows a destruction focus with periosteum detachment and Codmans triangle found at the defect border in the bone cortex. X-ray of chest reveals multiple small focal metastases. What treatment is indicated?
A. Palliative chemotherapy
 B. Radioiodine therapy
 C. Disarticulation of the lower extremity
 D. Amputation of the lower extremity
 E. Distance gamma-ray therapy
18. A 3-year-old male patient consulted a family doctor 2 months after he had been operated for an open fracture of brachial bone. Objectively: the patients condition is satisfactory, in the region of the operative wound there is a fistula with some purulent discharge, redness, fluctuation. X-ray picture shows brachial bone destruction with sequestra. What complication arose in the postoperative period?
A. Posttraumatic osteomyelitis
 B. Wound abscess
 C. Hematogenic osteomyelitis
 D. Posttraumatic phlegmon
 E. Suture sinus

19. A 36-year-old injured has been taken to the emergency station with open tibial fractures. Examination reveals bleeding: pulsating blood spurts out of the wound. What medical manipulations are required at this stage of medical care?
- A. **Apply a tourniquet on the thigh proximal to the source of bleeding and transport the patient to the operating room**
 - B. Transport the patient to the operating room
 - C. Apply a tourniquet on the thigh distal to the source of bleeding and transport the patient to the operating room
 - D. Immobilize the fracture and transport the patient to the operating room
 - E. Stop the bleeding by a compressive bandage and transport the patient to the operating room