Orenburg state medical university

**ASSESSMENT FUND**

**FOR ONGOING MONITORING OF STUDENTS` PERFORMANCE AND MIDTERM ATESTATION**

**IN PRACTICE**

**«Traumatology and Orthopedics»**

for

*31.05.01 General Medicine, Faculty of Foreign Students*

It is part of the main professional educational program of higher education *31.05.01. General Medicine, Faculty of Foreign Students* approved by the Academic Council of the Orenburg state medical university

record No. 8 dated March 25th, 2016

Orenburg

1. **Assessment fund passport**

Assessment fund for practice contains standard control and assessment materials for monitoring learning performance formed in the process of passing the practice at intermediate attestation in the form of final test.

Control and assessment materials for intermediate attestation correspond to the form of intermediate certification for this type of practice, defined in the major professional academic program curriculum and are aimed at checking skills and experience in practical activities for each competence established in the practice program.

As a result of undertaking practical training, a student develops **the following expertises**:

**PС-19 -** the ability to organize medical assistance in emergency situations, including medical evacuation

**PC-8** - the ability to determine the tactics of managing patients with various nosological forms

**2. Assessment materials for students` midterm attestation.**

Assessment materials in the framework of the discipline module

**Module # 1 "General Traumatology"**

Abstract topics:

1. N. I. Pirogov, as the founder of military field surgery

2. Anaerobic infection. Non-clostridial infection

3. Tetanus

4. Rabies

5. Traumatic shock

6. Long-term compression syndrome. Positional ischemia

7. Polytrauma. Traumatic illness

8. Defects in posture. Scoliotic disease

9. Osteochondrosis of the spine

10. Fat embolism

11. Longitudinal and transverse flat feet

12. Benign bone tumors

13. Malignant bone tumors

14. Osteochondropathies

15. Congenital hip dislocation

16. Congenital clubfoot

17. Medical rehabilitation of the consequences of injuries and orthopedic diseases

 18. Traumatic osteomyelitis

**Evaluation materials for each topic of the discipline**

***Module 1: "General Traumatology»***

**Practical lesson 1.**

Topic: **Injuries. Organization of trauma care. Fundamentals of classification, clinic, and diagnosis of fractures. Methods of examination in traumatology and orthopedics. Principles and methods of treatment of bone fractures.**

Questions for consideration:

1. Injuries, types of injuries.

2. Fundamentals of the organization of trauma care.

3. Classification of fractures of the musculoskeletal system.

4. The mechanism of trauma-the concept, types. The role of the mechanism of trauma in the occurrence of various injuries of the musculoskeletal system.

5. Clinical symptoms of fractures and dislocations – relative and absolute.

6. Measurement of the length, circumference of the limb, the volume of movements in the joints.

7. Methods of instrumental diagnostics - radiography, angiography, CT, MRI, radioisotope studies.

8. Principles of treatment of fractures.

9. Methods of conservative treatment of fractures: skeletal traction, plaster dressings, complications in the application of conservative treatment.

 10. Methods of surgical treatment of fractures: types of osteosynthesis, joint replacement, arthroscopy. Complications during the use of surgical treatment.

**Practical lesson 2.**

 Topic: **Traumatic shock. Bleeding. Blood loss. Long-term tissue compression syndrome.**

Questions for consideration:

1. Bleeding. Definition. Classification of bleeding.

2. Acute blood loss. Classification. Determination of the volume of blood loss.

3. Methods of temporary stopping of bleeding.

4. Rules for applying a hemostatic tourniquet.

5. Control of the correctness and validity of the application of the tourniquet.

6. The technique of applying a clamp (ligation of a vessel in the wound), a pressure bandage and a tight tamponade of the wound.

7. Classification of vascular injuries.

8. Methods for the final stop of bleeding.

9. Compensation for blood loss of varying severity.

10. Traumatic shock. Pathogenetic factors of traumatic shock.

11. Diagnosis and classification of traumatic shock.

12. Principles of anti-shock assistance. Treatment of shock.

13. Pathogenesis of SDS. Classification of VTS.

14. Clinical periods of SDS.

 17. First aid for SDS.

**Practical lesson 3.**

Topic: **Wounds and their treatment.**

Questions for consideration:

1. Features of modern wounds. Principles of wound ballistics. Classification of gunshot wounds. Morphological characteristics of the gunshot wound.

2. The body's reaction to a gunshot injury.

3. Methods of mechanical, physical, and chemical treatment of wounds, the possibility of such treatment at the stages of medical evacuation.

4. Tactics in the presence of extensive wounds, significant soft tissue defects.

5. Types of surgical treatment of wounds. Indications and contraindications to it.

6. Types of seams, indications and terms of their application.

7. The goals and stages of primary surgical treatment (PHO) of the wound.

8. Principles of medical triage, the order of operational aid and evacuation, the scope and measures of first medical and qualified assistance to the wounded.

**Practical lesson 4.**

Topic: **Wound infection.**

Questions for consideration:

1. Terminology of infectious complications of wounds and injuries. Classification. Pathogens.

2. Local infectious complications. Clinic and diagnosis of purulent (aerobic) wound infectious complications.

3. Surgical methods of treatment of local infectious complications of wounds. Principles of prevention and conservative treatment of purulent wound infection.

4. Clinic and diagnosis of clostridial anaerobic wound infection.

5. Clinic and diagnosis of non-clostridial anaerobic wound infection.

6. Surgical treatment of anaerobic wound infections. Features of conservative treatment of anaerobic wound infections.

7. Sepsis. Diagnosis and main directions of treatment.

8. Antimicrobial prevention and treatment of infectious complications of wounds and injuries in war and disaster.

 9. Measures to prevent infectious complications of combat trauma at the stages of evacuation.

**Practical lesson 5.**

Topic: **Thermal injuries.**

Questions for consideration:

1. Classification of thermal burns.

2. Diagnostics of the depth and area of the burn.

3. Burn shock, classification. Periods of burn disease. Forecast.

4. Damage to the upper respiratory tract. Causes, clinic and diagnosis, first aid and treatment of respiratory tract lesions.

5. Features of the defeat of combat fire mixtures.

6. Radiation burns. The clinic. Assistance to the affected at the stages of medical evacuation.

7. Medical sorting and treatment of the burned at the stage of first aid.

8. Medical triage and treatment of burned patients at the stage of qualified medical care.

9. Frostbite. Classification and diagnosis.

10. General hypothermia (freezing). Classification and diagnosis.

 11. Help with cold injuries at the stages of medical evacuation.

**Practical lesson 6.**

Topic: **Degenerative and inflammatory diseases of the joints. Osteoporosis.**

Questions for consideration:

1. Osteoarthritis. Statistical data. Etiology. Pathogenesis. Pathological anatomy. The clinic. Diagnostics.

2. General principles of conservative and surgical treatment. Rehabilitation. Outcomes.

3. Deforming arthrosis of the hip joint. Classification. Features of diagnosis and clinical course. Conservative and surgical treatment. Forecast.

4. Indications for various operations on the hip joint (therapeutic osteotomies, arthrodesis, endoprosthetics) Outcomes.

5. Deforming arthrosis of the knee joint. Features of diagnosis, clinic and treatment. Conservative and surgical treatment.

6. Deforming arthrosis of the ankle and other joints. Congenital hip dysplasia.

7. Brachiopathic periarthrosis.

8. Endoprosthetics of large joints.

 9. Osteoporosis.

**Practical lesson 7.**

 Topic: **Bone tumors, osteochondropathies. Congenital diseases of the musculoskeletal system.**

Questions for consideration:

1. Benign tumors of the musculoskeletal system.

2. Malignant tumors of the musculoskeletal system.

3. Osteochondropathies-etiology, treatment, prevention.

4. Congenital clubfoot: classification, diagnosis, treatment methods. Features of treatment in children of the first months of life.

5. Congenital muscular torticollis. Funnel-shaped deformity of the chest. Torticollis. Pterygoid scapula. Sprengel's disease. Patellar lateroposition. Clinical signs, general principles of treatment.

6. Issues of prevention and early diagnosis of congenital deformities of the musculoskeletal system.

***Module 2. Private traumatology and orthopedics.***

**Practical lesson 1.**

Subject: **Head and neck injuries. Patient supervision**.

Questions for consideration:

1. Classification of gunshot head injuries.

2. Clinic and diagnosis of gunshot head injuries. Traumatic brain disease.

3. Determination of the severity of brain damage, diagnosis of life-threatening consequences of gunshot head injuries.

4. Classification of neognestrel head injuries.

5. Clinic and diagnosis of neognestrel head trauma.

6. Medical triage and first aid measures for head injuries.

7. Medical triage and qualified assistance measures for head injuries.

8. Classification of neck injuries.

9. Clinic and possible complications of neck injuries.

 10. Assistance to victims with injuries to the larynx, trachea, esophagus, and neck vessels.

**Practical lesson 2.**

Topic: **Chest injury**.

Questions for consideration:

1. Classification of chest injuries. Life-threatening consequences.

2. Classification of acute respiratory failure in chest injuries.

3. Diagnosis and treatment of closed pneumothorax.

4. Diagnosis and treatment of open pneumothorax.

5. Diagnosis and treatment of strenuous pneumothorax.

6. Diagnosis and treatment of hemothorax.

7. Diagnosis and treatment of heart injury.

8. Diagnosis and treatment of heart injuries (hemopericardium, cardiac tamponade).

9. Diagnosis and treatment of the rib valve.

10. Diagnosis and treatment of traumatic asphyxia.

11. Diagnosis and treatment of thoracoabdominal wounds.

12. Medical triage and first aid measures for chest injuries.

13. Medical triage and qualified assistance measures for chest injuries.

**Practical lesson 3.**

Topic: **Spinal injuries**.

Questions for consideration:

1. Anatomical structure, functions of the vertebral column.

2. Classification of spinal fractures, stable and unstable fractures.

3. Injuries of the cervical spine. Mechanisms of injury, clinic, complications, first aid, transport immobilization.

4. Injuries in the thoracic and lumbar spine. Mechanisms of injury, clinic, complications, first aid, transport immobilization.

5. Principles of conservative and surgical treatment of spinal injuries, the concept of rehabilitation.

**Practical lesson 4.**

Topic: **Injuries to the abdomen and pelvis**.

Questions for consideration:

1. Classification of abdominal injuries. Life-threatening consequences.

2. Clinic and diagnosis of gunshot wounds of the abdomen.

3. Clinic and diagnosis of closed abdominal injuries.

4. Principles of surgical treatment for wounds and closed abdominal injuries.

5. Medical triage and first aid measures for those wounded in the abdomen.

6. Medical triage and qualified care measures for those wounded in the abdomen. Surgical tactics for abdominal injuries.

7. Classification of pelvic injuries.

8. Clinic and diagnosis of gunshot wounds of the pelvis.

9. Clinic and diagnosis of neognestrelny pelvic injuries.

10. Medical triage and first aid measures for the wounded in the pelvis.

 11. Medical triage and qualified care measures for the wounded in the pelvis.

**Practical lesson** 5.

Subject: **Injuries to the shoulder girdle, shoulder.**

Questions for consideration:

1. Anatomical and physiological features of the shoulder joint.

2. Transport immobilization for fractures and dislocations of the shoulder.

3. Fractures of the proximal humerus: classification, clinic.

4. Fractures of the proximal humerus: types of conservative and surgical treatment. Terms of immobilization and consolidation.

5. Features of the clinic and treatment of fractures of the proximal humerus in the elderly and senile age.

6. Fractures of the humerus diaphysis: classification, clinic, early complications. Diagnosis of damage to the main nerve trunks.

7. Fractures of the humerus diaphysis: types of conservative and surgical treatment. Terms of immobilization and consolidation.

8. Fractures of the distal humerus: classification, clinic, features in children (epiphysiolysis, supracondylar fractures).

9. Fractures of the distal humerus: types of conservative and surgical treatment. Terms of immobilization and consolidation.

10. Complications of shoulder fractures (damage to large vessels and nerves): methods of diagnosis, treatment and prevention.

11. Shoulder dislocations: classification, clinic, diagnosis.

12. Shoulder dislocations: methods of reduction, terms of immobilization.

**Practical lesson 6.**

Subject: **Injuries to the forearm and hand**.

Questions for consideration:

1. Anatomical and physiological features of the forearm and hand: the structure and functions of the skeleton, muscles, tendons, large neurovascular bundles.

2. Fractures of the forearm bones: classification, clinic. Fractures-dislocations of Montegia and Galeazzi.

3. Types of conservative and surgical treatment of fractures of the proximal part and diaphysis of the forearm bones. Terms of immobilization and consolidation.

4. Fractures of the distal part of the forearm bones. Fractures of the radius in a typical place. Mechanisms of trauma. Clinic, treatment, terms of immobilization and consolidation, complications.

5. Fractures of the navicular bone, metacarpal bones and phalanges of the hand: classification, clinic. Bennett's fractures.

6. Features of diagnosis and treatment of navicular bone fractures. The timing of consolidation.

7. Fractures of the metacarpal bones and phalanges of the hand: types of conservative and surgical treatment. Terms of immobilization and consolidation.

8. Injuries of the tendons of the hand: diagnosis, treatment, complications, rehabilitation. Types of tendon sutures.

9. Dislocations of the forearm: clinic, diagnosis, methods of reduction, terms of immobilization. Subluxation of the head of the radius in children.

 10. The concept of modern possibilities of replantation, reconstructive surgery of the hand.

**Practical lesson 7.**

Subject: **Hip fractures and dislocations.**

Questions for consideration:

1. Anatomical and physiological features of the proximal femur, taking into account age-related changes. Topography of the main neurovascular bundles.

2. Classification of fractures of the proximal femur. Clinic of fractures of the neck and trochanteric fractures of the hip. Transport immobilization in case of hip fractures and dislocations.

3. Hip neck fractures: types of conservative and surgical treatment. Terms of immobilization and consolidation. Complications of fractures (false joint, coxarthrosis).

4. Aseptic necrosis of the femoral head in adults, Perthes ' disease: clinic, early diagnosis, treatment principles, outcomes.

5. Features of the clinic and treatment of hip fractures in the elderly and senile age. The concept of hip replacement.

6. Trochanteric hip fractures: types of conservative and surgical treatment. Terms of immobilization and consolidation.

7. Hip dislocations: classification, diagnosis, methods of reduction, types and terms of immobilization.

8. Fractures of the femoral shaft: classification, clinic, early complications, first aid, types of surgical treatment, terms of immobilization and consolidation.

9. Prevention of thromboembolic complications.

**Practical lesson 8.**

Topic: **Injuries and diseases of the knee joint.**

Questions for consideration:

 1. Some anatomical features of the knee joint. The structure and role of the menisci of the knee joint. Cruciate and lateral ligaments, their role in the function of the knee joint. Damage statistics.

2. Damage to the lateral ligaments. Primary damage. The mechanism. Symptoms and diagnosis, conservative treatment. Long-standing damage to the lateral ligaments. Symptoms. X-ray diagnostics. Methods of surgical treatment. Postoperative treatment. Outcomes.

3. Damage to the cruciate ligaments. Primary damage. Diagnostics. Treatment. Long-standing damage. The concept of instability of the knee joint. Methods of surgical treatment. Endoprosthetics and autoplasty. Outcomes.

4. Damage to the meniscus. The frequency of damage to the internal and external menisci. Joint blockages. Symptoms and diagnosis of acute and chronic meniscal injuries. The value of X-ray examination. Conservative treatment. Indications and results of surgical treatment.

5. A combination of damage to the internal meniscus, internal lateral and anterior cruciate ligaments ("ill-fated triad").

 6. The role of endoscopic technologies in the diagnosis and treatment of injuries and diseases of the knee joint.

**Practical lesson 9.**

Subject: **Fractures of the shin and foot bones**.

Questions for consideration:

1. Anatomical and physiological features of the lower leg, foot. Topography of large neurovascular bundles.

2. Classification of diaphyseal fractures of the lower leg bones, clinic and diagnosis.

3. Transport immobilization in case of fractures of the bones of the lower leg and foot.

4. Diaphyseal fractures of the lower leg bones: types of conservative and surgical treatment. Terms of immobilization and consolidation.

5. Classification of ankle fractures, mechanism of injury, clinic and diagnosis.

6. Types of conservative and surgical treatment of ankle fractures. Terms of immobilization and consolidation.

7. Fractures of the metatarsal bones, phalanges of the toes: classification, clinic, treatment, terms of immobilization and consolidation.

8. Fractures of the calcaneus: mechanism of injury, classification, clinic, types of conservative and surgical treatment, terms of consolidation.

9. Osgood-Schlatter disease: clinic, early diagnosis, principles of treatment, outcomes.

**Practical lesson 10.**

Topic: **Orthopedic pathology of the feet.**

Questions for consideration:

1. Fundamentals of biomechanics in walking and the role of the foot in the formation of gait.

2. Longitudinal and transverse flat feet, flat-valgus foot, deviation of 1 toe outwards, hammer-shaped toes, heel spur. Etiology, pathogenesis, classification, diagnosis, principles of conservative and surgical treatment.

3. Marching fractures: etiology, clinic, diagnosis, treatment.

4. Posttraumatic deformities of the feet: prevention, diagnosis, methods of correction. Orthopedic devices, orthopedic shoes for deformity of the feet.

 5. Congenital clubfoot: classification, diagnosis, treatment methods. Features of treatment in children of the first months of life.

**Practical lesson 11.**

Topic: **Pathology of the spine**.

Questions for consideration:

1. Anatomical structure, functions of the vertebral column.

2. Malformations of posture, scoliotic disease: classification, pathogenesis, early diagnosis, principles of treatment.

3. Osteochondrosis of the spine: concept, etiology, pathogenesis.

4. Osteochondrosis of the spine: the main clinical syndromes in the defeat of the cervical, thoracic, and lumbar regions.

5. Scheuermann-Mau disease. Clinic, early diagnosis, treatment principles, outcomes.

6. Osteochondrosis of the spine: prevention and treatment.

**Practical lesson 12.**

Topic: **Fundamentals of outpatient trauma care.**

Questions for consideration:

1. Methods of examination of a traumatological patient.

2. General symptoms of fractures and dislocations.

3. Types of plaster dressings.

4. Rules for performing novocaine blockades.

5. Emergency prevention of tetanus.

6. Rules and points of joint puncture.

7. Primary surgical treatment of the wound.

 8. Registration of primary medical documentation.

**Questions for the exam in "traumatology and orthopedics"**

1. Polytrauma: types, features of diagnosis. Traumatic illness: periods,

clinical characteristics.

2. Non-clostridial anaerobic infection of wounds: etiology, epidemiology, forms, diagnosis, treatment and prevention.

3. Anaerobic clostridial infection of wounds: etiology, epidemiology, forms, diagnosis, treatment and prevention.

4. Tetanus: etiology, epidemiology, clinic, diagnosis, treatment and prevention.

5. Purulent infection of wounds: types, diagnosis, treatment, prevention. The concept of secondary surgical treatment of wounds, indications for its implementation.

6. Injury of blood vessels. Temporary and final hemostasis. Indications for blood transfusion and blood substitutes.

7. Organization of the blood service: procurement, transportation, storage, determination of the validity of blood and the algorithm of blood transfusion.

8. Traumatic shock: pathogenesis, classification, diagnosis.

9. Traumatic shock: classification, treatment and prevention.

10. Long-term tissue compression syndrome: pathogenesis, clinic, treatment. Positional ischemia.

11. Characteristics of modern firearms. Explosive damage. Barotrauma.

12. The mechanism of action of the wounding projectile. Classification and characteristics of gunshot wounds.

13. The concept of primary surgical treatment of wounds. Purpose, tasks, types (by time), equipment.

14. Types of sutures after surgical treatments of wounds. Indications for their use, the timing of application.

15. Etiology and classification of burns. Methods for determining the depth and area of the lesion. The formulation of the diagnosis.

16. Burn shock: features, diagnosis, principles of therapy.

17. Burn toxemia and septic toxemia. Clinic, treatment.

18. Local treatment of burns. Types of surgical interventions: methods, indications.

19. Electrotrauma: classification, pathogenesis, clinic, complications, first aid, treatment. Lightning strike.

20. Frostbite: pathogenesis, classification, treatment. General freezing.

21. Closed craniocerebral trauma: classification, clinic, treatment. The concept of traumatic brain disease.

22. Compression of the brain: causes, clinic, diagnosis and treatment.

23. Injuries craniocerebral trauma: classification, clinic, treatment. The concept of traumatic brain disease.

22. Compression of the brain: causes, clinic, diagnosis and treatment.

23. Neck injuries: classification, clinic, complications, treatment.

24. Injuries of the cervical spine: types, diagnosis, complications and treatment.

25. Fractures of the vertebral bodies in the thoracic and lumbar regions: clinic, treatment.

26. Chest injuries: classification, clinic, complications, step-by-step treatment.

27. Closed breast injuries: classification, clinic, step-by-step treatment.

28. Abdominal injuries: clinic, diagnosis, stage-by-stage treatment.

29. Damage to the kidneys, bladder and urethra: types, clinic, diagnosis, treatment.

30. Fractures and dislocations of the clavicle: mechanism, clinic, first aid and treatment. Types of bandages and tires for transport and medical immobilization.

31. Fractures of the scapula: frequency, mechanism, clinic, diagnosis, first aid and treatment.

32. Shoulder dislocations: predisposing anatomical factors, classification, clinic, diagnosis. Methods of reduction and immobilization.

33. Fractures of the proximal humerus: types, clinic, first aid and treatment.

34. Fractures of the humerus diaphysis: clinic, complications, diagnosis and treatment.

35. Fractures of the distal humerus: classification, clinic, features in children.

36. Fractures of the forearm bones, fractures and dislocations of Montegia and Galiazzi: types, diagnosis, treatment.

37. Dislocations of the forearm: types, diagnosis, methods of reduction. Subluxation of the head of the radius in children.

38. Fractures of the radius in a typical place: types, diagnosis and treatment. Features in children.

39. Fractures of the navicular bone, metacarpal bones and phalanges of the hand: features, diagnosis and treatment.

40. Pelvic fractures: classification, clinic, diagnosis, complications, first aid and treatment.

41. Hip dislocations: classification, diagnosis, methods of reduction, therapeutic immobilization, terms of rehabilitation.

42. Femoral neck fractures: anatomical and physiological features of the proximal femur, types of fractures, clinic, diagnosis and treatment.

43. Trochanteric hip fractures: features, types, clinic, diagnosis, treatment, prevention of complications.

44. Fractures of the femoral shaft: diagnosis, early complications, first aid, treatment.

45. Fractures of the condyles of the femur and tibia, patella: diagnosis, complications, first aid and treatment.

46. Injuries of the meniscus of the knee joint: clinic, diagnosis, treatment.

47. Injuries of the ligamentous apparatus of the knee joint: types, clinic, diagnosis, treatment.

48. Fractures of the shaft of the lower leg bones: clinic, diagnosis, treatment.

49. Ankle fractures: types, clinic, complications, diagnosis, treatment. Terms of immobilization.

50. Fractures of the calcaneus: mechanism, clinic, diagnosis, treatment.

51. Open fractures: classification, clinic, complications, treatment. Gunshot fractures (features).

52. Methods of treatment of fractures. Indications for their use.

53. Damage to the tendons of the hand: diagnosis, types of tendon sutures, complications, rehabilitation.

54. Ungrown fractures, false joints, bone defects. The reasons for their occurrence. Treatment.

55. Malformations of posture, scoliotic disease: pathogenesis, classification, clinic, treatment.

56. Osteochondrosis of the spine: etiology, pathogenesis, clinic, treatment.

57. Osteoarthritis of the hip joint. Classification. Features of diagnosis and clinical course. Treatment.

58. Osteoarthritis of the knee joint. Features of diagnosis, clinic and treatment. Conservative and surgical treatment.

59. Congenital muscular torticollis. Funnel-shaped deformity of the chest. Clinical signs, treatment.

60. Congenital hip dislocation: etiology, clinic, diagnosis, treatment.

61. Congenital clubfoot: classification, diagnosis, treatment methods.

62. Longitudinal and transverse flat feet. Etiology, pathogenesis, classification, diagnosis, treatment principles.

63. Osteochondropathies: aseptic necrosis of the femoral head in adults, Perthes ' disease.

64. Osteochondropathies: Koenig's disease, Osgood-Schlatter's disease.

65. Classification of bone tumors. Osteogenic sarcoma (clinic, principles of treatment).

 66. Classification of bone tumors. Osteoma, osteoblastoclastoma clinic, principles

 of treatment.

**Texts of situational tasks**

**Task 1**

A 52-year-old patient suffered a hip injury in a car accident. The condition at admission is satisfactory. The leg is immobilized by a Dieterichs splint. There is an indistinct deformity in the middle third of the thigh, palpation here is painful, while pathological mobility of the bone is revealed. There are no neurovascular disorders in the leg.

Specify the diagnosis of the injury (a). Name the purpose of the X-ray examination (b).List successively the treatment measures (c).

**Task 2**

During the explosion of a chemical munition, he received a shrapnel wound to the soft tissues of his left thigh. In the wound immediately appeared a strong pain, burning, which soon decreased. The wound is gray-ashen in color, the swelling of the surrounding tissues is pronounced, the skin is hyperemic; separate blisters have appeared that do not merge with each other. Complains of headache, nausea, vomiting, general weakness, blood pressure 95/50 mm Hg.

Make a diagnosis, determine the sorting group for this wounded person (intra-point and evacotransport sorting) and list the measures at the stages of first medical and qualified surgical care.

**Task 3**

A patient came to you with complaints of pain in the left half of the chest, which increases with a deep breath. The patient fell, hit his chest on the edge of the table.

Name the presumed diagnosis of the injury (a), list the expected results of visual (b), palpatory (c), auscultative (d) and radiological (e) studies. Also indicate the most essential element of treatment (e).

Task 4

When the mine exploded, he was injured in his left leg. He can't stand on his feet. Severe pain in the knee joint area. There are several wound holes with a diameter of 0.5-3.0 cm on the outer surface of the left thigh and lower leg. Movements in the knee joint are sharply painful, bone crepitation is determined. The wounds bleed moderately.

Formulate a diagnosis. Treatment at the stages of evacuation.

**Task 5**

Wounded in the thigh by shrapnel from an artillery shell explosion. There was a heavy bleeding of scarlet blood from the wound. His companion placed an improvised tourniquet from his waist belt on his thigh. On the antero-internal surface of the thigh - a wound with uneven edges measuring 3x5 cm. From the wound comes a moderate amount of scarlet blood. Deformity and pathological mobility of the hip is not determined.

 Formulate a diagnosis. Treatment at the stages of evacuation.

**Task 6**

During the explosion of the ball bomb, he was wounded in the stomach, chest and left shoulder. I am worried about severe abdominal pain. From a wound with a diameter of 0.5 cm in the left abdomen (mesogastrium), a bloody fluid with an intestinal odor is released. There are two similar wounds on the anterolateral surface of the chest on the left without separating, and two on the anterior surface of the left shoulder. The shoulder is deformed in the middle third, and pathological mobility is determined.

Formulate a diagnosis. Treatment at the stages of evacuation.

**Task 7**

Wounded by shrapnel in the thigh. There was a lot of bleeding. He was taken to the first aid stage on a stretcher with a bandage and a tourniquet on his hip. The general condition is serious. Pulse 130 beats per minute, blood pressure 85/30 mm Hg. Feels thirsty. The pathological mobility of the hip is not determined.

Formulate a diagnosis. Determine the severity of blood loss and the required amount of transfusion and infusion therapy at the stages of first medical and qualified surgical care.

**Task 8**

The patient was hit by a car. Complains of pain in the pubic area. Palpation of the pubic bones is sharply painful. Percutorily revealed an overflow of the bladder. Self-urination is not possible. The soft catheter does not pass into the bladder. When the catheter was removed, a few drops of blood were released from the urethra.

Name the diagnosis of the injury (a) and its complications (b). Name the most reliable ways to confirm them (c, d), as well as the method of emergency emptying of the bladder (e). Name the therapeutic measure, the need for which is dictated by the presence of a complication (e).

**Task 9**

The wounded man has a blind shrapnel wound of the pelvis with damage to the intraperitoneal rectum.

Formulate a diagnosis. Determine the necessary measures for the prevention of wound infection at the stages of first medical, first medical and qualified surgical care.

**Task 10**

The soldier was wounded by a shrapnel in the chest. To the right of the anterior to posterior axillary line there is a wide gaping wound measuring 10x2 cm with uneven edges. At the bottom of it, you can see a bare rib. The wound bleeds moderately. Subcutaneous emphysema.

Formulate a diagnosis. Treatment at the stages of evacuation.

**Task 11**

The patient slipped on the ice and fell on his buttocks. Complains of pain in the lumbar region, which increases when the patient tries to bend. Palpation of the muscles of the lumbar region reveals their tension. When feeling the spinous process of the CP of the thoracic vertebra, its bulging is determined, the pressure on it causes sharp pain. The gap between the spinous processes of the CP of the thoracic and 1 lumbar vertebrae is expanded. What is the preliminary diagnosis of the injury (a), its localization (b). In what position should the patient be transported if the stretcher does not have a rigid shield (c)? What signs confirming the diagnosis should be expected on the front (d) and profile (d) radiographs.

**Task 12**

The explosion of an anti-personnel mine tore off the left foot. There was a lot of bleeding. A friend put a twist on his shin. The left foot is supported on a skin flap. Bone fragments of the lower leg and foot bones are visible in the wound.

Formulate a diagnosis. Treatment at the stages of evacuation.

**Task 13**

The patient, 30 years old, was hit by a car. Delivered without immobilization. The condition is serious. Pulse 106 beats per minute, weak filling. Blood pressure 85/60 mm Hg. In the upper third of the thigh, the wound is 3x1. 5 cm, not bleeding. The leg is sharply deformed here, its varus curvature is determined. The pulsation of the arteries of the foot and the movements in it are preserved.

Specify the diagnosis of the injury and its complications (a. b). List the urgent medical measures in the proper sequence (c), give a plan for further treatment of the fracture (d).

**Task 14**

The patient, while diving in a shallow place, hit his head on a hard bottom. Pulled out of the water by his comrades. The victim complains of loss of sensitivity and lack of movement in the limbs, as well as difficulty breathing.

Formulate a preliminary diagnosis of the damage (a). Specify the position of the patient during his evacuation to a medical institution (b), the method of immobilization during evacuation (c). Name the simplest method of providing assistance (d) for life-threatening respiratory disorders, as well as the method of research in a medical institution (e), without the results of which it is impossible to choose the necessary method of treatment. List the elements of a neurological examination in such patients (E. zh. zh. i).

**Task 15**

The soldier was wounded by a bullet in the left thigh. Immediately fell, can't stand on his feet. On the antero-internal surface of the lower third of the left thigh, the wound is 1. 5x1. 5 cm in size. The second wound is on the posterior surface of the thigh, measuring 6x7 cm. The wounds bleed moderately. The hip in the lower third is deformed, its pathological mobility is determined.

Formulate a diagnosis. Treatment at the stages of evacuation.

**Task 16**

In a burning building on the trail of a radioactive cloud, he received burns. The skin of the forearms, hands and shins is hyperemic, covered with blisters. There is a brown scab on the front surface of the right shin and on the thigh. The general condition is serious. Repeated vomiting was observed. Thirst. Individual dosimeter readings 3 Gr.

 Make a diagnosis, determine the sorting group for this wounded person

 (intra-point and evacuation sorting) and the necessary measures at the stages of

 first medical and qualified surgical care.

**Task 17**

In a nuclear explosion, he received burns from light radiation. The skin of the hands, face, neck is hyperemic, there are blisters. After 2 hours, nausea, vomiting, and general weakness appeared. Individual dosimeter readings 2.5 G.

Make a diagnosis, determine the sorting group for this wounded person (intra-point and evacuation sorting) and the necessary measures at the stages of first medical and qualified surgical care.

**Task 18**

The wounded man has a blind shrapnel wound in the gluteal region. Routine vaccinations against tetanus were not carried out.

Formulate a diagnosis. Determine the necessary measures for the prevention of wound infection at the stages of first medical, first medical and qualified surgical care.

**Task 19**

The wounded man has a mine-blast injury with a separation of the right foot, bone damage and detachment of the soft tissues of the lower leg: heavy contamination of the wound with earth.

Formulate a diagnosis. Determine the necessary measures for the prevention of wound infection at the stages of first medical, first medical and qualified surgical care.

**Task 20**

The wounded man has a blind shrapnel wound of the right thigh in the middle third with damage to the femoral artery: severe blood loss. Blood pressure 70/40 mm Hg, pulse 130 beats per minute, breathing H4 in 1 min. The skin is cold to the touch.

Determine the severity of the traumatic shock and the necessary measures at the stages of first medical, first medical and qualified surgical care.

**Task 21**

The patient's leg was crushed by the weight. There is a sharp deformity in the lower third of the thigh. The foot is pale, there is no pulsation of its vessels. Radiography revealed a supracondylar femoral fracture with a significant posterior and upward displacement of the distal fragment. The swelling on the back of the thigh and in the popliteal area is not sharp.

Formulate a complete diagnosis of the injury (a), name the emergency intervention and its purpose (b), as well as the method of immobilization of the fracture (c). Name the possible complication of the fracture that should be kept in mind in the first days of treatment (d).

**Task 22**

The patient fell into the palm of his outstretched hand. Complains of sharp pain in the elbow and the inability to bend in it. The joint area is deformed, the forearm is shortened, the ulnar process protrudes posteriorly, its tip is located above the Guter line and outside of the shoulder axis.

Specify the full name of the injury (a), the method of its confirmation (b). Name the possible complication (c) and its expected manifestations (d). Also specify the method of anesthesia (e) and the position of the hand during medical immobilization (e).

**Task 23**

A 52-year-old patient suffered a hip injury in a car accident. The condition at admission is satisfactory. The leg is immobilized by a Dieterichs splint. There is an indistinct deformity in the middle third of the thigh, palpation here is painful, while pathological mobility of the bone is revealed. There are no neurovascular disorders in the leg.

Specify the diagnosis of the injury (a). Name the purpose of the X-ray examination (b). List successively the treatment measures (c)

**Task 24**

As a result of falling on an outstretched arm, the patient felt a sharp pain in his shoulder. During the examination, attention is drawn to the forced position of the shoulder retraction.

What is the most likely diagnosis of the injury (a), the results of the attempt to passively bring the shoulder (b), the measurement data of the absolute (c) and relative (d) arm length, as well as the data from the study of the limb axis (e). What will be detected on the radiographs (e)?

**Task 25**

Three days ago, the patient hit his back when falling from the sudden braking of the bus. The doctor of the polyclinic established the presence of a rib fracture on the left, put a pressure bandage on the chest, recommended the patient to take analgin. The patient's state of health did not improve, there was pain when breathing. This was joined by a cough with sputum, shortness of breath began to increase, and the temperature increased. The patient has tachycardia, cyanosis of the lips, high fever, a sharp weakening of breathing on the left, scattered wet wheezing.

Name the diagnosis of the condition (a), note the mistakes of the attending physician that undoubtedly contributed to the deterioration of the patient's condition (b), list the measures necessary to eliminate the complication (c).

**Task 26**

A patient came to you with complaints of pain in the left half of the chest, which increases with a deep breath. The patient fell, hit his chest on the edge of the table.

Name the presumed diagnosis of the injury (a), list the expected results of visual (b), palpatory (c), auscultative (d) and radiological (e) studies. Also indicate the most essential element of the treatment (e).

**Task 27**

Going down the stairs in the dark, the patient stumbled with his right foot and fell on his right side. At the same time, the foot abruptly turned outwards. The joint is sharply swollen, the foot is in the hallux valgus position and in the position of plantar flexion. The skin on the anterior-inner surface is sharply stretched. The inner ankle is not contoured. The lower-anterior edge of the tibia is felt.

What is the diagnosis of the injury (a), the expected results of radiography (b), the urgency of medical measures (c) and the nature of the likely surgical intervention (d) in the near future after the injury. Name the purpose of therapeutic manipulations on the day of admission of the patient (e) and subsequent surgical intervention (e).

**Task 28**

Wounded by shrapnel in the chest. To the right of the anterior to posterior axillary line there is a wide gaping wound measuring 10 x 2 cm with uneven edges. At the bottom of it, you can see a bare rib. The wound bleeds moderately. Subcutaneous emphysema.

Formulate a diagnosis. Treatment at the stages of evacuation.

**Task 29**

The patient slipped on the ice and fell on his buttocks. Complains of pain in the lumbar region, which increases when the patient tries to bend. Palpation of the muscles of the lumbar region reveals their tension. When feeling the spinous process of the CP of the thoracic vertebra, its bulging is determined, the pressure on it causes sharp pain. The gap between the spinous processes of the CP of the thoracic and 1 lumbar vertebrae is expanded.

What is the preliminary diagnosis of the injury (a), its localization (b). In what position should the patient be transported if the stretcher does not have a rigid shield (c)? What signs confirming the diagnosis should be expected on the front (d) and profile (d) radiographs ?

**Task 30 The**

driver in a car accident hit his chest on the steering wheel, felt a sharp pain, could not breathe deeply. The condition at the admission of moderate severity. Pale. Complains of chest pains.

Specify the presumed diagnosis of the injury (a), the method of detecting the injury (b), the projection in which the X-ray should be made (c), possible concomitant injuries, the presence of which could explain the severity of the condition (d). List urgent measures aimed at improving breathing and blood circulation in the small circle (e).

**Task 31**

The patient was delivered after a car accident. Complains of pain in the hip joint. The leg is in the position of flexion, adduction and internal rotation. There is a significant relative shortening of it. The large spit is located high above the Roser-Nelaton line. Pronounced lordosis is detected.

Formulate a complete diagnosis of the damage (a), specify the method of its confirmation (b), list the sequence of therapeutic measures (c).

**Task 32**

A 60-year-old patient slipped on the sidewalk, hit her palm in the fall. Complains of pain when moving in the wrist joint. The pressure on the distal part of the radius is sharply painful.

Specify the diagnosis of the injury (a), the types of displacement of the peripheral fragment that you expect to see on the X-ray (b), as well as the method of anesthesia when managing the fragments (c).

**Task 33**

The patient was delivered after falling from a considerable height on his straightened legs. Complains of pain in the heel area.

What is the presumed diagnosis (a). What concomitant damage is not uncommon with this mechanism of injury, should be kept in mind (b)? A detailed diagnosis of which of these injuries should be given priority (b)? How would you define the main tasks of diagnosis in such patients and the sequence of their solutions, (d,d, e), taking into account the possibility of complications ?

**Task 34**

The patient, 30 years old, was hit by a car. Delivered without immobilization. The condition is serious. Pulse 106 beats per minute, weak filling. Blood pressure 85/60 mm Hg. st. In the upper third of the thigh, the wound is 3 x 1.5 cm, not bleeding. The leg is sharply deformed here, its varus curvature is determined. The pulsation of the arteries of the foot and the movements in it are preserved.

Specify the diagnosis of the injury and its complications (a. b). List the urgent medical measures in the proper sequence (c), give a plan for further treatment of the fracture (d).

**Task 35**

The patient, while diving in a shallow place, hit his head on a hard bottom. Pulled out of the water by his comrades. The victim complains of loss of sensitivity and lack of movement in the limbs, as well as difficulty breathing.

Formulate a preliminary diagnosis of the damage (a). Specify the position of the patient during his evacuation to a medical institution (b), the method of immobilization during evacuation (c). Name the simplest method of providing assistance (d) for life-threatening respiratory disorders, as well as the method of research in a medical institution (e), without the results of which it is impossible to choose the necessary method of treatment. List the elements of a neurological examination in such patients (E. zh. zh. i).

**Task 36**

A 72-year-old patient was delivered after falling on her right side. Complains of pain in the knee joint. The leg is in the position of incomplete external rotation, shortened by 2 s. m. The attempt to bring it to a normal position is accompanied by pain in the hip joint. No visible changes were detected in this area.

Formulate a complete diagnosis of the damage (a), the number (b) and the name (c) of the projections for the X-ray examination. List the essential therapeutic manipulations (d) that must be performed after the diagnosis is confirmed. Specify the method of further treatment, provided that the patient is in a satisfactory condition

**Examples of test tasks.**

1. In what phase of providing assistance to victims is the primary surgical treatment of wounds performed?

a) in the isolation phase;

b) in the rescue phase;

c) in the recovery phase.

2. Indicate the level of training of medical workers that corresponds to qualified medical

care.

a) paramedic;

b) general practitioner;

c) general surgeon;

d) a specialist doctor (traumatologist, thoracic surgeon, angiosurgeon, etc.);

e) an anesthesiologist.

3. In the provision of what type of medical care can be performed cavity operations?

a) the first medical procedure;

b) qualified;

c) specialized.

4. What measures in the provision of first aid can be postponed due to the large flow of

victims?

a) catheterization of the bladder with urinary retention;

b) administration of antibiotics;

c) administration of tetanus toxoid;

d) revision of the previously applied tourniquet;

5. What measures in the provision of qualified medical care can be delayed due to the large flow of victims (more than 400 per day)?

a) amputation of a limb with irreversible ischemia;

b) trepanation of the skull in the presence of intracranial hematoma;

c) primary surgical treatment of soft tissue wounds;

d) splinting for fractures of the lower jaw;

e) the imposition of an epicystostomy for extraperitoneal damage to the bladder.

6. What measures in the provision of qualified medical care can be delayed due to the

large flow of victims (from 200 to 400 per day)?

a) amputation of a limb with irreversible ischemia;

b) trepanation of the skull in the presence of intracranial hematoma;

c) primary surgical treatment of soft tissue wounds;

d) splinting for fractures of the lower jaw;

e) the imposition of an epicystostomy for extraperitoneal damage to the bladder.

7. Where should victims with

a penetrating abdominal wound without signs of decompensated shock be sent during first aid?

a) to the dressing room;

b) to the operating room;

c) to the platform for agonizing patients;

d) to the evacuation room;

e) in the anti-shock.

8. Specify the general pathogenetic factor, equally inherent in the shock that develops with multiple-

severe skeletal trauma, damage to a large vessel with massive blood loss, toxic damage.

a) pain syndrome;

b) hypovolemic disorders;

c) violation of the function of external respiration.

9. Which of the listed clinical signs can be used to assess the state of hemodynamics?

a) skin temperature of the extremities;

b) central venous pressure;

c) hourly diuresis;

d) rectal-cutaneous temperature gradient;

e) blood pressure.

10. What phases are distinguished in the development of shock?

a) reversible decompensated;

b) subcompensated;

c) irreversible decompensated;

d) reversible compensated.

11. The shock index is:

a) the ratio of the pulse rate to the central venous pressure;

b) the ratio of systolic blood pressure to pulse rate;

c) the ratio of heart rate to systolic blood pressure;

d) the ratio of systolic blood pressure to diastolic blood pressure;

e) the ratio of systolic blood pressure to central venous pressure.

12. What is the basis for the development of adult respiratory distress syndrome?

a) tense pneumothorax;

b) asphyxia;

c) interstitial pulmonary edema;

d) lung injury.

13. What is common in the development of uremic, traumatic and hypothermic coma?

a) mechanical damage or compression of the brain substance;

b) the effect of endotoxins on the brain;

c) hypoxia of the brain;

d) a long stage of arousal.

14. Intravenous infusions as an element of anti-shock therapy are carried out when:

a) first aid is provided;

b) pre-medical care;

c) first aid;

d) qualified assistance;

e) specialized assistance.

15. When providing first aid, victims with decompensated reversible shock should

be:

a) detained for recovery from shock and subsequent evacuation;

b) detained for the transfer of the shock to the compensated phase and subsequent evacuation;

c) immediately evacuated with anti-shock measures on the way;

d) detained for symptomatic therapy.

16. When providing qualified care, victims with reversible decompensated shock and damage to the small intestine without signs of intra-abdominal bleeding should be referred:

a) to the operating room for emergency surgery;

b) in the anti-shock room for anti-shock therapy;

c) to the hospital for infusion therapy and preparation for surgery.

17. Which of the following measures should be performed in the complex of anti-shock therapy in the provision of first aid?

a) infusion therapy;

b) transport immobilization;

c) stopping intra-abdominal bleeding;

d) novocaine blockades.

18. To restore the patency of the respiratory tract when taking Safar, you need to:

a) put a pillow under the victim's head;

b) throw the victim's head back;

c) bring the chin of the victim to the chest, bending the head;

d) push the victim's lower jaw forward;

e) open and examine the mouth.

19. When providing first aid to the victim, who is in an unconscious state,

for the prevention of asphyxia, it is necessary:

a) throw the victim's head back;

b) turn your head to the side;

c) give the victim a semi-sitting position;

d) remove from the oral cavity and fix the tongue;

e) tie up the lower jaw to prevent the mouth from opening.

20. When providing first aid for the elimination of asphyxia with complete airway obturation, the following methods are used:

a) tracheostomy;

b) release of the oral cavity from vomit and mucus;

c) tracheal intubation;

d) aspiration of the contents from the upper respiratory tract via a catheter;

e) cricothyroidomy.

21. With asystole, you can cause heart contractions by using:

a) administration of epinephrine intracardiacally;

b) injection of epinephrine into the subclavian vein; c

) punching the sternum;

d) defibrillation (discharge 3500 V);

e) defibrillation (discharge 6000 V).

22. What applies to the methods of temporary stopping of bleeding?

a) dressing of the vessel in the wound;

b) applying a hemostatic clamp;

c) forced flexion of the limb;

d) ligation of the vessel throughout.

23. When providing what type of medical care can the final stop of intra-

abdominal bleeding be made?

a) pre-medical care;

b) first aid;

c) qualified assistance;

d) specialized assistance.

24. What are the victims in the reversible decompensated stage of shock when providing first aid

should be evacuated immediately, without stopping for medical manipulations?

a) with a broken pelvic bone and a ruptured bladder;

b) with a gunshot fracture of the hip;

c) with a lung injury and valvular pneumothorax;

d) with ongoing intra-abdominal bleeding;

e) evacuation of all victims of decompensated shock is prohibited.

25. What is a contraindication to emergency surgery with continuing intra-abdominal bleeding when providing qualified medical care?

a) reversible compensated shock;

b) reversible uncompensated shock;

c) the agonal state.

26. Specify the measures taken in case of blood transfusion shock, related to qualified medical care.

a) paranephral block;

b) the blockade on Shkolnikov;

c) administration of heparin;

d) intravenous administration of calcium chloride;

e) transfusion of donor plasma.

27. In what cases is blood transfused during first aid?

a) with ongoing intra-abdominal bleeding;

b) in acute blood loss as a result of damage to the femoral artery after applying a clamp to it;

c) with continued intrapleural bleeding;

d) blood transfusions are not performed at all when providing first aid.

28. Compensation for acute blood loss during first aid is carried out using the following infusion-transfusion media

:

a) only crystalloid solutions;

b) only colloidal solutions;

c) both colloidal and crystalloid solutions;

d) the main volume of infusions is made up of blood and its preparations.

29. With what degree of limb ischemia can there be no passive movements in the joints?

a) with compensated;

b) when decompensated;

c) when irreversible.

30. At what degree of limb ischemia are there no indications for emergency restoration of the damaged main vessel?

a) when compensated;

b) when decompensated;

 c) when irreversible.

31. Temporary bypass grafting of the vessel can be used for the first time when providing:

a) first aid;

b) qualified assistance;

c) specialized assistance.

32. What kind of anesthesia can be applied to a victim with a chest injury when providing first

aid?

a) vagosympathetic blockade;

b) paravertebral block;

c) the blockade on Shkolnikov;

d) case blockage;

e) endotracheal anesthesia.

33. What kind of anesthesia can be used in the primary surgical treatment of a gunshot wound of the upper third of the thigh?

a) intra-phase blockade according to Shkolnikov;

b) case blockage;

c) femoral nerve block;

d) anesthesia;

e) sciatic nerve block;

e) epidural anesthesia.

34. In the provision of what type of care can intra-bone anesthesia be performed?

a) pre-medical;

b) the first medical examination;

c) qualified;

d) specialized.

35. In the provision of what type of care is anesthesia performed by the method of tight creeping infiltrate according to Vishnevsky?

a) pre-medical;

b) the first medical examination;

c) qualified;

d) specialized.

36. Specify the actions of the medical worker in providing them with pre-medical care, aimed at reducing the pain syndrome in the victim with a hip fracture.

a) anesthesia of the fracture area;

b) administration of narcotic analgesics;

c) sciatic nerve block;

d) transport immobilization.

37. Specify the most effective method of anesthesia when providing first aid to a victim with an open fracture of the lower leg bones.

a) blockage of the fracture site;

b) case blockage;

c) epidural anesthesia.

38. When providing what type of assistance for the purpose of immobilization, plaster bandages are used?

a) first aid;

b) pre-medical;

c) the first medical examination;

d) qualified;

e) specialized.

39. The most optimal option for transport immobilization in an open hip fracture is:

a) the application of Kramer's ladder tires;

b) applying the Dieterichs splint;

c) applying a pneumatic tire;

d) fixation to a healthy hip.

40. In case of shoulder fractures, the best option for immobilization in the provision of pre-medical care is:

a) applying ladder splints to the upper arm on the side of the injury;

b) applying the Dieterichs splint;

c) application of the CITO discharge tire;

d) applying ladder splints to a healthy shoulder;

e) superimposition of a modeled plaster spar.

41. What action (or actions) when applying transport immobilization is incorrect?

a) splints are applied directly to clothing, without freeing the injured limb;

b) after applying the ladder tire is carefully modeled;

c) in case of open fractures, traction is performed before immobilization so that the remaining bone fragments are hidden under the skin;

d) the splint is applied so as to immobilize not only the underlying, but also the overlying joint;

e) for a full-fledged fixation, the ladder tires are bandaged as tightly as possible.

42. In case of a hip fracture in the lower third, the following joints should be immobilized:

a) ankle and knee;

b) hip and knee ;

c) ankle, knee and hip.

43. What kind of plaster cast can be applied when providing first aid to a victim with a popliteal artery injury before further evacuation?

a) longline;

b) circular;

c) the plaster cast is not applied at all.

44. What kind of plaster cast can be applied when providing qualified medical care to a victim with a popliteal artery injury before further evacuation?

a) longline;

b) circular;

c) the plaster cast is not applied at all.

45. Which of the following is transport immobilization?

a) Dezo dressing for a broken collarbone;

b) Salnikov's bandage for dislocations of the acromial end of the clavicle;

c) Dieterichs splint in hip fracture;

d) thoracobrachial dressing for shoulder fracture;

e) the diverting splint of the CITO in case of a shoulder fracture.

46. Mark the areas of the gunshot wound.

a) molecular shaking;

b) bacterial contamination;

c) the primary wound canal;

d) primary necrosis.

47. In case of a bullet wound:

a) the diameter of the inlet is larger than the diameter of the outlet;

b) the diameter of the outlet is larger than the diameter of the inlet;

c) the inlet and outlet diameters are approximately the same.

48. If the victim has a blind shrapnel deep wound with a narrow entrance opening, the primary surgical treatment should begin with:

a) probing to determine the depth and direction of the wound canal;

b) excision of the crushed edges of the wound; c

) removal of foreign bodies;

d) dissection of the wound.

49. When is it necessary to drain the wound after primary surgical treatment?

a) only if it is impossible to conduct a full-fledged hemostasis;

b) only in the case of significant contamination of the wound;

c) only in the absence of confidence in the complete excision of non-viable tissues;

d) only in the absence of the possibility of further adequate antibiotic therapy and dynamic monitoring;

e) in all cases.

50. Is it possible to apply primary blind stitches after primary surgical treatment for a gunshot wound?

a) it is possible when the person is injured;

b) it is possible in the absence of a gunshot fracture;

c) it is possible on the plantar surface of the foot;

d) it is possible with concomitant radiation damage;

e) the application of primary sutures for all types of gunshot wounds is strictly prohibited.

51. Where should a victim with a gunshot wound of the hip be sent without damage to the main vessels in the decompensated reversible phase of shock when providing qualified assistance?

a) to the operating room for primary surgical treatment of the wound with parallel anti-shock therapy;

b) to the dressing room for primary surgical treatment of the wound with parallel anti-shock therapy;

c) to the anti-shock room for anti-shock therapy, and then to the dressing room for primary surgical treatment;

d) to the hospital for anti-shock therapy and subsequent evacuation.

52. What type of immunization against tetanus is carried out for an adult vaccinated person who has received a superficial incised wound of the forearm?

a) active only;

b) only passive;

c) no work is carried out;

d) both active and passive.

53. What type of tetanus immunization is given to an adult vaccinated person who has received a large gunshot wound to the thigh, contaminated with earth?

a) active only;

b) only passive;

c) no work is carried out;

d) both active and passive.

54. Specify the measures to prevent anaerobic infection at the stages of medical evacuation.

(a) Transport immobilization;

b) primary surgical treatment of the wound;

c) refusal to apply primary sutures;

d) adequate anesthesia;

55. What is the microbial number?

a) the number of microbial colonies grown on the culture medium when seeding exudate from the wound;

b) the number of microbial strains seeded from a single wound;

c) the number of microbial bodies in 1 mm3 of tissue;

d) the number of microbial bodies in the field of view during microscopy of wound exudate at magnification

56. What is the role of antibiotics in the treatment of wounds?

a) sterilize the wound;

b) contribute to the formation of granulations;

c) delay the development of wound infection;

d) reduce wound exudation.

57. Early clinical signs of tetanus include:

a) significant edema without signs of hyperemia in the circumference of the wound;

b) trism of the masticatory muscles;

c) difficulty swallowing;

d) tonic and clonic seizures;

e) rigidity of the occipital muscles.

58. When is the local use of antiseptics indicated?

a) during the primary surgical treatment of the wound;

b) during secondary surgical treatment of the wound;

c) in the stage of acute purulent inflammation;

d) in the regeneration stage;

e) at the stage of epithelialization.

59. Gas gangrene is characterized by the following signs:

a) hyperemia in the circumference of the wound;

b) absence of local hyperthermia;

c) severe intoxication;

d) air accumulates in the subcutaneous tissue and does not accumulate in the muscles.

60. Note the reliable signs of a fracture:

a) sharp local soreness;

b) absolute shortening of the limb;

c) pronounced edema in the area of damage;

d) bone crepitation;

 e) abnormal mobility.

61. Which of the following symptoms are characteristic of dislocations of large joints of the extremities?

a) change in the absolute length of the limbs;

b) change in the relative length of the limbs;

c) excessive mobility in the joint area;

d) spring resistance when trying to move in the joint.

62. An attempt to correct the dislocation should be made when providing:

a) first aid;

b) pre-medical care;

c) first aid;

d) qualified assistance.

63. What kind of anesthesia should be performed when correcting a hip dislocation?

a) anesthesia;

b) the introduction of a concentrated solution of novocaine into the joint cavity;

c) case anesthesia;

d) sciatic nerve block.

64. Closed manual reposition of fragments in uncomplicated fractures of the bones of the extremities is performed when

:

a) pre-medical care is provided;

b) first aid;

c) qualified assistance;

d) specialized assistance.

65. If an open fracture causes bone fragments to survive in the wound, they must be treated with first aid.:

a) set it in the wound and apply a protective bandage;

b) apply a protective bandage, without setting the fragments in the wound.

66. In the conditions of step-by-step treatment in a victim with an open fracture, the protective bandage applied immediately after the injury should be removed for the first time when providing:

a) first medical care only with continuing external bleeding;

b) first aid, regardless of the presence of bleeding;

c) qualified assistance only in case of continued external bleeding;

d) qualified assistance, regardless of the presence of bleeding.

67. Which option of fixing fragments with an open comminuted fracture of the lower leg bones is the most preferable in the conditions of step-by-step treatment of victims of disasters?

a) external fixation with a plaster cast;

b) submerged osteosynthesis;

c) extra-focal osteosynthesis;

d) application of transport tires reinforced with gypsum.

68. At the end of the primary surgical treatment of a wound penetrating into the joint, the joint capsule:

a) always suture tightly with the installation of drains;

b) suture only in cases of absence of intra-articular fractures;

c) suture only for neognestrel wounds;

d) never suture.

69. Transport amputation of a limb is:

a) guillotine amputation of a limb with symptoms of gas gangrene during the evacuation of the victim in an ambulance;

b) cutting off the limb hanging on the skin flap, with incomplete traumatic separation;

c) amputation of a limb with an open fracture with crushing of soft tissues before evacuation to the next stage.

70. Specify the radiological signs of instability of the vertebral fracture:

a) fracture of the spinous processes of the vertebrae;

b) fracture of the transverse processes of the vertebrae;

c) compression V2 of the vertebral body height;

d) dislocation or subluxation of the vertebral bodies.

71. Indicate the symptoms that may occur with a vertebral fracture in the lumbar region:

a) pain under axial load;

b) pain during palpation of the spinous processes;

c) unevenness of the spinous spaces;

d) tension of the back muscles;

e) tension of the muscles of the anterior abdominal wall.

72. Which of the following anesthesia options are indicated for vertebral fractures in the lumbar region?

a) blockage of intercostal spaces;

b) vagosympathetic blockade;

c) blockage of interspinous spaces;

d) intra-phase blockade according to Shkolnikov.

73. Specify the methods of transportation of the victim with a suspected spinal injury:

a) on the shield in the position on the stomach;

b) on the shield in the back position;

c) on a soft stretcher in the stomach position;

d) on a soft stretcher in the back position;

e) on the shield in the position of Volkovich.

74. Specify the support points of the extensional plaster corset:

a) pubis, ribs, upper arms;

b) shoulder blades, pubis, sternum;

c) lumbar region, sternum, pubis;

d) sternum, wings of the iliac bones, lumbar region.

75. Which of the following measures should be performed to the victim with a spinal fracture and compression of the spinal cord in the acute period when providing first aid?

a) novocaine blockade of the interspinous spaces;

b) decompressive laminectomy;

c) catheterization of the bladder;

d) lumbar puncture.

76. Specify the methods of treatment of stable uncomplicated compression fracture of the I lumbar vertebra:

a) reclination on an orthopedic table with the imposition of a corset;

b) gradual repositioning on recliners;

c) surgical treatment: fixation of the spine with plates;

d) functional treatment.

77. A pelvic fracture of the Malgenya type is:

a) fracture of the pubic and sciatic bones on one side;

b) bilateral fracture of the pubic and sciatic bones;

c) a fracture of the pelvic bones with a violation of the integrity of the posterior semicircle;

d) fracture of the ilium with damage to the upper part of the acetabulum;

e) a fracture of the pelvic bones with a violation of the integrity of the anterior and posterior semicircles.

78. Indicate the clinical symptoms of pelvic bone fractures:

a) relative shortening of the hip on the side of the fracture;

b) a positive symptom of spreading load on the wings of the iliac bones;

c) a positive symptom of a compressive load on the wings of the iliac bones;

d) a positive symptom of a stuck heel.

79. Choose the right tactics when providing qualified medical care for a ruptured urethra:

a) urethral suture;

b) epicystostomy;

c) drainage of paravesical fiber;

d) puncture of the bladder;

e) removal of urine by a catheter.

80. What factors determine the severity of the condition of the victim with closed pelvic fractures of the Malgenya type?

a) pain syndrome;

b) bladder atony;

c) acute blood loss.

81. In pelvic fractures, pseudoabdominal syndrome is caused by:

a) intraperitoneal rupture of the bladder;

b) overflow of the bladder when the urethra is damaged;

c) retroperitoneal hematoma;

d) damage to the rectum.

82. With a closed chest injury (rib fractures), complicated by pneumothorax,

the following symptoms may be determined:

a) shortness of breath;

b) hemoptysis;

c) subcutaneous emphysema;

d) blunting of the percussion sound.

83. Subcutaneous emphysema in closed rib fractures is a reliable sign of:

a) hemopneumothorax;

b) pneumothorax;

c) lung injury;

d) lung damage.

84. In case of closed chest injury (rib fractures), complicated by hemothorax, the following symptoms may be determined:

a) bradycardia;

b) weakening of breathing;

c) subcutaneous emphysema;

d) blunting of the percussion sound on the damage side.

85. The scope of first aid to victims with penetrating chest wounds includes:

a) vagosympathetic blockade;

b) infusion therapy;

c) puncture of the pleural cavity;

d) thoracotomy if indicated.

86. The indication for thoracotomy in the provision of qualified medical care is:

a) heart injury;

b) open pneumothorax;

c) continued intrapleural bleeding;

d) closed pneumothorax.

87. The application of an occlusive dressing is indicated to the victim when:

a) closed pneumothorax;

b) open pneumothorax;

c) external valvular pneumothorax;

d) internal valvular pneumothorax.

88. Extensive, increasing subcutaneous emphysema is characteristic of:

a) closed pneumothorax;

b) open pneumothorax;

c) valvular pneumothorax;

d) large hemothorax.

89. Specify the optimal location for puncture of the pleural cavity in pneumothorax:

a) in the seventh intercostal space along the posteromuscular line;

b) in the second intercostal space along the midclavicular line;

c) in the tenth intercostal space along the scapular line;

d) in the area where subcutaneous emphysema is most pronounced;

e) in the second intercostal space along the scapular line.

90. Specify the optimal location for puncture of the pleural cavity in hemothorax:

a) in the seventh intercostal space along the posteromuscular line;

b) in the second intercostal space along the midclavicular line;

c) in the tenth intercostal space along the scapular line;

d) in the center of the zone of dulling the percussion sound;

e) in the second intercostal space along the scapular line.

91. When providing first aid to a victim with a penetrating wound of the abdominal cavity and the

eventration of internal organs, it is necessary:

a) to inject a narcotic analgesic;

b) to set the eventrirovannye organs in the abdominal cavity;

c) apply a protective bandage;

d) moisten the dressing with water.

92. Primary surgical treatment of the anterior abdominal wall wound without clinical signs of damage-

internal organs in the provision of qualified medical care should be carried out:

a) in the dressing room;

b) in the operating room;

c) in the absence of damage to the internal organs, only the wound is cleaned.

93. Reliable signs of a penetrating wound of the abdominal cavity are:

a) loss of the omentum from the wound;

b) positive Shchetkin — Blumberg symptom;

c) the discharge of intestinal contents from the wound;

d) localization of the wound in the area of the anterior abdominal wall.

94. In the case of a penetrating wound of the abdomen, when providing qualified medical care, patients should first be operated on:

a) with signs of bleeding into the abdominal cavity;

b) with spilled peritonitis;

c) in a satisfactory condition;

d) with a clinical picture of traumatic shock.

95. The tension of the anterior abdominal wall can be noted in:

a) ruptures of the intestine;

b) fractures of the pelvic bones;

c) fractures of the vertebrae in the lumbar region;

d) superficial wounds of the abdominal wall.

96. When providing qualified medical care, the victim with an intracranial hematoma on the-

sent:

a) to the hospital for dehydration therapy;

b) to the dressing room;

c) to the operating room;

d) to the anti-shock room for preoperative preparation;

e) to the evacuation department: evacuation is primarily for the provision of specialized surgical care.

97. Concussion of the brain is characterized by:

a) language deviation;

b) amnesia;

c) anisocoria;

d) vomiting.

98. Intracranial hematoma is characterized by:

a) loss of consciousness;

b) tachycardia;

c) anisoreflexion;

 d) a sharp drop in blood pressure.

99. Left-sided intracranial hematoma may be indicated by:

a) dilation of the pupil on the right;

b) dilation of the pupil on the left;

c) hemiparesis on the right;

d) hemiparesis on the left.

100. What is a reliable sign of a skull base fracture?

a) anisocoria;

b) the "glasses" symptom»

c) nausea and vomiting;

d) nasal or ear liquorrhea;

 e) rigidity of the occipital muscles.

**Assessment criteria used in the current control of academic performance, including the control of independent work of students.**

|  |  |
| --- | --- |
| **Control form** | **Evaluation criteria** |
| **Oral survey** | The "EXCELLENT" rating evaluates the answer, which shows a solid knowledge of the main issues of the studied material, differs in the depth and completeness of the topic disclosure; possession of the terminological apparatus; the ability to explain the essence of phenomena, processes, events, draw conclusions and generalizations, give reasoned answers, give examples; fluency in monological speech, logic and consistency of the answer. |
| The "GOOD" rating evaluates the answer that reveals a solid knowledge of the main questions of the studied material, differs in the depth and completeness of the disclosure of the topic; possession of the terminological apparatus; the ability to explain the essence of phenomena, processes, events, draw conclusions and generalizations, give reasoned answers, give examples; fluency in monological speech, logic and consistency of the answer. However, one or two inaccuracies in the answer are allowed. |
| The "SATISFACTORY" rating evaluates the answer that indicates mainly the knowledge of the material being studied, characterized by insufficient depth and completeness of the topic disclosure; knowledge of the main questions of the theory; poorly formed skills of analyzing phenomena, processes, insufficient ability to give reasoned answers and give examples; insufficient fluency in monological speech, logic and consistency of the answer. Several errors are allowed in the content of the response. |
| The "UNSATISFACTORY" rating evaluates the answer that reveals ignorance of the studied material, characterized by a shallow disclosure of the topic; ignorance of the main questions of the theory, unformed skills in analyzing phenomena and processes; inability to give reasoned answers, poor command of monological speech, lack of logic and consistency. Serious errors are allowed in the content of the response. |
| **Testing** | The score "EXCELLENT" is given if 91-100% of the answers are correct |
| The rating "GOOD" is given if 81-90% of the answers are correct |
| The rating "SATISFACTORY" is given if 71-80% of the answers are correct |
| The "UNSATISFACTORY" rating is given if 70% or less of the answers are correct. |
| **Solving situational problems** | The grade "EXCELLENT" is given if the student is given the correct answer to the question of the problem. The explanation of the course of its solution is detailed, consistent, competent, with theoretical justifications (including from the lecture course), with the necessary schematic images and demonstrations of practical skills, with correct and fluent knowledge of terminology; the answers to additional questions are correct and clear. |
| The rating "GOOD" is given if the student is given the correct answer to the question of the problem. The explanation of the course of its solution is detailed, but not logical enough, with isolated errors in details, some difficulties in theoretical justification (including from lecture material), in schematic images and demonstrations of practical actions, the answers to additional questions are correct, but not clear enough. |
| The rating "SATISFACTORY" is given if the student is given the correct answer to the question of the problem. The explanation of the course of its solution is not complete enough, inconsistent, with errors, weak theoretical justification (including lecture material), with significant difficulties and errors in schematic images and demonstration of practical skills, the answers to additional questions are not clear enough, with errors in details. |
| The rating "UNSATISFACTORY" is given if the student is given the correct answer to the question of the problem. The explanation of the course of its solution is given incomplete, inconsistent, with gross errors, without theoretical justification (including lecture material), without the ability of schematic images and demonstrations of practical skills, or with a large number of errors, the answers to additional questions are incorrect or absent. |
| **Protection of the abstract** | The "EXCELLENT" rating is given if the students meet all the requirements for writing and defending the abstract: the problem is identified and its relevance is justified, a brief analysis of various points of view on the problem under consideration is made and their own position is logically stated, conclusions are formulated, the topic is fully disclosed, the volume is maintained, the requirements for external design are met, correct answers to additional questions are given. |
| The "GOOD" rating is given if the students meet the basic requirements for the abstract and its defense, but there are shortcomings. In particular, there are inaccuracies in the presentation of the material; there is no logical sequence in the judgments; the volume of the abstract is not maintained; there are omissions in the design; incomplete answers are given to additional questions during the defense. |
| The rating "SATISFACTORY" is given if the student allows significant deviations from the requirements for abstracting. In particular, the topic is only partially covered; there are factual errors in the content of the abstract or in answering additional questions; there is no conclusion during the defense. |
| The rating "UNSATISFACTORY" is set if the student does not disclose the topic of the abstract, there is a significant misunderstanding of the problem |
| **Checking your medical history** | Checking the medical history The "EXCELLENT" rating is given if the clinical history of the disease is issued in due time and in full compliance with the required sample, without corrections, grammatical and stylistic errors; a comprehensive and in-depth knowledge of internal diseases (basic lassifications, diagnostic criteria of diseases) is shown for the presented clinical case; the ability to conduct differential diagnostics taking into account the main syndrome in a particular patient is shown; a plan of examination and treatment for the main and concomitant pathology in the presented patient is skillfully drawn up; creative abilities are shown in understanding, presenting and applying the material in a particular clinical case; there are no significant comments on writing and formatting the medical history. |
| The rating "GOOD" is given if-the clinical history of the disease is drawn up in due time and in full accordance with the required sample, without corrections in the text, grammatical and stylistic errors; full knowledge of internal diseases (main classifications, diagnostic criteria of diseases) is shown for the presented clinical case; the ability to conduct differential diagnostics taking into account the main syndrome in a particular patient is shown; a plan of examination and treatment for the main pathology in the presented patient is skillfully drawn up; there are some unprincipled comments on the writing and registration of the medical history. |
| The rating "SATISFACTORY" is issued if the clinical history of the disease is not fully formed, with corrections and errors; Incomplete knowledge of the main sections of internal diseases (classifications, diagnostic criteria of diseases) for the presented clinical case is shown; incomplete ability to conduct differential diagnostics taking into account the main syndrome in a particular patient is shown; the examination and treatment plan for the main pathology in the presented patient is not complete; there are significant fundamental comments on the writing and registration of the medical history. |
| The rating "UNSATISFACTORY" is given if-the medical history is drawn up, but does not fully correspond to the required sample, with corrections and errors; fundamental errors were made in the formulation and design of the clinical diagnosis; very weak, superficial knowledge of internal diseases is shown for the presented patient; differential diagnosis for the main syndrome in a particular patient is not correctly and skillfully carried out; the examination and treatment plan is drawn up clumsily.; ignorance of the groups of drugs used in this patient and the mechanisms of their action is shown; there are a lot of fundamental essential comments on the writing and registration of the medical history. |

**Criteria used for assessing students at midterm attestation**

*(The disciplinary rating is calculated as follows:*

*if the form of midterm attestation in the discipline – final test: RD = Rc + Rb + Rt,*

***Rb –*** *bonus rating;*

***Rd –*** *disciplinary rating;*

***Rt-*** *test rating;*

***Rc –*** *current rating (Rating score for practical training (for completing must-have skills);*

**Assessment criteria for practice test**

|  |  |
| --- | --- |
| **Control form** | **Assessment criteria** |
| Pass | 1. Keeping a diary
 |
| 1. Making a practice report
 |
| 1. Practical skill demonstration
 |
| 1. Characteristics given by the head of a medical organization
 |

**11-15 points.** If there is no failure of meeting the deadlines for handing over reporting documents, all documentation is drawn up in accordance with the requirements; there is a positive characteristic from the practice place. A student demonstrated high activity during the practice, good practical skills during the test. The answers to the questions posed are presented logically, consistently and do not require additional explanations. The causal relationships between phenomena and events are fully disclosed. Reasonable conclusions are made. A student demonstrates in-depth knowledge of the basic regulatory legal acts. The norms of literary speech are observed.

**6-10 баллов.** If there is no failure of meeting the deadlines for handing over reporting documents, the reporting documentation contains minor errors and shortcomings, indicating a certain decrease in the level of professionalism in performing tasks. A student was given a positive characteristic from the place of practice. A student demonstrates practical skill with minor errors, but without gross violations of the algorithm. The answers to the questions posed are presented in a systematic and consistent manner. The material is presented with confidence. The causal relationships between phenomena and events are revealed. The ability to analyze the material is demonstrated, but not all conclusions are reasoned and evidence-based. The norms of literary speech are observed. (Test: the number of correct answers> 70%).

**3-5 баллов.** Minor failure of meeting the deadlines for handing over reporting documents without a valid reason, there are errors and shortcomings in the reporting documentation, indicating a decrease in the level of professionalism in performing tasks. A student demonstrated practical skill with one / two gross mistakes. In the answer there are violations in the sequence of presentation. The causal relationships between phenomena and events are not fully disclosed. Superficial knowledge of the issue is demonstrated, specific tasks are difficult to solve. There are difficulties with conclusions. Violations of the norms of literary speech are allowed. (Test: the number of correct answers> 50%).

**0-2 балла.** The documentation is performed with serious comments. There is no positive characteristic from the place of work. The material is presented inconsistently, does not represent a specific system of knowledge in the discipline. The cause-and-effect relationships between phenomena and events are not disclosed. Analysis is not performed. There are no conclusions. There are no answers to additional questions. There are noticeable violations of the norms of literary speech. (Test: the number of correct answers <50%).

**Examination ticket pattern**

ORENBURG STATE MEDICAL UNIVERSITY

department Traumatology and orthopedics

training program\_ 31.05.01 General Medicine, Faculty of Foreign Students

discipline Traumatology and orthopedics

**EXAMINATION TICKET No. 1.**

**I.** Organization of the blood service: procurement, transportation, storage, determination of the validity of blood and the algorithm of blood transfusion**.**

**II.** Ankle fractures: types, clinic, complications, diagnosis, treatment. Terms of immobilization.

**III.** X-ray No. 3

Head of Department \_\_\_\_\_\_\_\_\_\_\_\_\_ ( Guryanov А. М)

Faculty dean \_\_\_\_\_\_\_\_\_\_\_\_\_ (Mironchev А.О.)

 «\_\_\_\_»\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_20\_\_\_

**List of equipment used for midterm attestation.**

Intermediate certification in the discipline in the form of an exam is carried out on examination tickets, in oral form, in the form of demonstrating practical skills, testing, reading radiographs and solving a situational problem.

**Correspondence table of training outcomes by discipline and -evaluation materials used at midterm attestation.**

|  |  |  |  |
| --- | --- | --- | --- |
| No. | controlled expertise | descriptor | Control and assessment tool (question / practical task number) |
| 1 | **РC 8** the ability to determine the tactics of managing patients with various nosological forms | Can organization of orthopedic and traumatological care in the Russian Federation, the system of emergency medical care; \* - the structure of institutions that provide outpatient and inpatient care to victims and patients of orthopedic and traumatological profile; • - legal aspects of the activity of an orthopedic traumatologist, insurance of the specialist's activity; • - general and special research methods in traumatology and orthopedics; • - fundamentals of pharmacotherapy in traumatology and orthopedics; • - fundamentals of preoperative preparation and postoperative management of patients with injuries and diseases of the organs of support and movement; • - the role and methods of rehabilitation in traumatology and orthopedics; • - the basics of physiotherapy, the role of spa treatment for injuries and diseases of the musculoskeletal system; • - equipment and tools used in orthopedic and traumatology practice; • - the main patterns of tissue regeneration of the musculoskeletal system | Practical tasks №1-100 |
| Hаve determine the algorithm of special research methods (biochemical, radiological, ultrasound, etc.) to be able to interpret their results • \* - to justify the method of anesthesia in patients with injuries and diseases of the musculoskeletal system; • - to justify the most appropriate plan of surgery for soft tissue injuries, traumatic dislocations and fractures; • - to prevent postoperative complications | Practical tasks №1-36. |
| Practical activities experience analgesia (local, intraosseous, conductor), the imposition of transport and medical immobilization, hardware and manual reposition of fragments; • - methods of reduction of dislocations, punctures • the imposition (without reposition) and removal of the simplest plaster dressings. \* Assessment of the condition of the limb in a plaster cast. • Methods of removing the plaster cast in a threatening condition | Practical training diary analysis 1-66 |
| 2 | **РC 19** the ability to organize medical assistance in emergency situations, including medical evacuation | Can classification of mechanical injuries; • - classification of bone fractures; • - indications for surgical methods of treatment of spinal injuries; • - classification and diagnostic criteria for pelvic bone fractures, • - indications for arthrodesis of the sacroiliac joint; • - tactics for pelvic bone fractures complicated by pelvic organ damage; • - classification of femoral neck fractures according to Garden and Pauwels; • - classification of fractures of the proximal end of the tibia and the mechanisms of damage, as well as indications for surgical treatment; \* - indications for surgical treatment of internal injuries of the knee joint, including by arthroscopy; • - clinical symptoms and X-ray diagnostics of numerous variants of fractures of the calcaneus; • - tunnel syndromes and methods of their treatment | Practical tasks № 1-100 |
| Have eliminate immediately life-threatening (vital) disorders in case of traumatic shock, bleeding, respiratory failure, cardiac arrest • Stop external bleeding by temporary means • Give the correct position to the patient with injuries to the limbs, pelvis, spine, large joints during transportation from the scene of the accident to the hospital for qualified or specialized care | Practical tasks №1-36 |
| Practical activities experience analgesia (local, intraosseous, conductor), the imposition of transport and medical immobilization, hardware and manual reposition of fragments; • - methods of reduction of dislocations, punctures • the imposition (without reposition) and removal of the simplest plaster dressings. \* Assessment of the condition of the limb in a plaster cast. • Methods of removing the plaster cast in a threatening condition | Practical training diary analysis 1-66 |

1. **Methodical recommendations for using point-rating system.**

Within the implementation of point-rating system for assessing the educational achievements of students on practice "Traumatology and orthopedics", in accordance with the provision "About the point-rating system for assessing educational achievements of students", the rules for the formation of the following ratings are defined:

* Student`s current actual rating;
* Student`s bonus actual rating.

**Rules for making the student`s current actual rating for practice**

The current actual rating for the student's practice is formed as a result of current control during practice by analyzing the implementation of must-have practical skills.

The bonus actual rating for the student's practice is the result of assessing the performance of optional skills during practice.

The current actual rating for practice and the bonus actual rating for the student's practice are expressed in points and are calculated in accordance with the approaches determined by the methodological recommendations for the use of the point-rating system, located in section 3 of the Federal educational standard practice (Appendix 2).

The approaches to the current actual rating in practice and the bonus actual rating for the student's practice are the same for all types of practices and are carried out on a scale from 1 to 70 and on a scale from 1 to 15, respectively. Thus, the values ​​of the current actual rating and the bonus actual rating do not need to be brought to standardized values, since they are standardized values.

The calculation of the current actual rating for practice and the bonus actual rating for the student's practice is carried out automatically upon completion of the student's work on the report in the Information System of the University and is available for the teacher during midterm attestation.

The current actual rating for practice is formed on the basis of the "Total coefficient of mastering must-have skills" (hereinafter referred to as the total coefficient), which is calculated according to formula 3.

actual value / target value = Cumulative coefficient (3),

where

the actual value is the total number of mandatory or practical actions performed by the student during the practice, provided for by the practice report;

the planned value is the total number of planned mandatory or practical actions during the practice, provided for by the practice report;

the total coefficient is the ratio of actually performed by the student and planned for the performed actions or practical actions within the framework of the practice program. Thr actual practice rating is equal to

* 70 points, if the total coefficient is more than 0.9 and less than or equal to 1;
* 65 points if the total coefficient is more than 0.8 and less than or equal to 0.9;
* 60 points, if the total coefficient is more than 0.7 and less than or equal to 0.8;
* 0 points if the total coefficient is less than or equal to 0.7.

The actual bonus rating in practice is formed on the basis of the bonus coefficient, which is calculated according to formula 4.

(total coefficient + number of elective skills) / planned value (4),

where

the number of optional skills is the number of optional or practical actions performed during the practice within the framework of the practice program;

The actual bonus practice rating is equal to

• 15 points if the received bonus coefficient is more than 2;

• 10 points, if the received bonus coefficient is greater than or equal to 1.5 and less than or equal to 1.9;

• 5 points if the received bonus coefficient is greater than or equal to 1.1 and less than or equal to 1.4;

• 0 points if the received bonus coefficient is less than 1.1.

If the practice is carried out modularly, then

• the current actual rating is calculated as the arithmetic mean of the current actual ratings for each practice module, which, in turn, are determined in accordance with clauses 9.6, 9.7 of this regulation;

• bonus actual rating is calculated as the arithmetic average of bonus actual ratings for each practice module, which, in turn, are determined in accordance with clauses 9.6, 9.7 of these regulations.

When calculating the disciplinary rating for practice, the value of the current actual rating is used as the current standardized rating, and the value of the bonus actual rating is used as the bonus standardized rating.

Rules for transfering the disciplinary ranking in practice into a five-point system.

|  |  |
| --- | --- |
| **PRS disciplinary rating** | **Mark for practice** |
| Grading test | Final test |
| 91– 100 points | 5 (excellent) | passed |
| 71 – 89 points | 4 (good) | passed |
| 65–70 points | 3 (satisfactory) | passed |
| 64 and less points | 2 (unsatisfactory) | not passed |