Assessment materials for intermediate certification in the discipline

Traumatology, orthopedics

Semester 8

Code, direction of preparation	31.05.01 General Medicine
Directivity (profile)	General Medicine
Form of study	full-time
Department-developer	Surgical diseases
Graduate department	Internal diseases

STANDARD TASKS FOR CONTROL WORK

CONTROL - HISTORY OF ILLNESS (8, 9 SEMESTER)

The test is carried out with the aim of monitoring students' assimilation of knowledge from the lecture course, assessing the knowledge and skills acquired during practical classes, as well as testing the ability to solve various types of problems that develop professional abilities in accordance with the requirements of the specialist's qualification characteristics. Test work is carried out according to the schedule during school hours in the amount provided for by the working day.

discipline program and teaching load of the teacher. Time to prepare for

test work is included in the number of hours of independent work of students and should not exceed 4 hours. The test work is assessed using a differentiated assessment. In case of an unsatisfactory grade received by the student, a new writing deadline is assigned.

test work during extracurricular hours. (Surgut State University Quality management system QMS SurGU STO-2.12.5-15 Organization of ongoing monitoring of academic performance and intermediate certification of students Revision No. 2 page 7 of 21)

WRITING A CLINICAL HISTORY OF A DISEASE

The student independently selects a nosological form, develops and defends a medical history according to the proposed scheme

The main stages of writing an educational history:

1. Title page (separate page)
2. Passport part.
3. Complaints: the main ones and those found during the survey by organ system.
4. History of the main and concomitant diseases.
5. Anamnesis of life.
6. Data from an objective examination of the patient (general status by system).
7. Data from an objective examination of the patient (local status).
8. Rationale for the preliminary diagnosis and its formulation.
9. Survey plan.
10. Laboratory and instrumental research data, consultants' opinions.
11. Final clinical diagnosis (rationale and formulation).
12. Differential diagnosis.
13. Treatment of the patient and its rationale (preoperative preparation, surgical stage, postoperative treatment).
14. Final clinical diagnosis (rationale and formulation)

15. Curation Diary .
16. Epicrisis.
17. Forecast.
18. List of used literature.

SAMPLE QUESTIONS FOR THE CREDIT (8th semester)
The test tasks include assessment of theoretical knowledge and assessment of practical skills - the ticket contains 3 questions (2 theoretical and 1 situational task).

Questions for oral questioning:
"Traumatology and Orthopedics"

1. Examination methods in traumatology.
2. Methodology for examining orthopedic patients
3. Features of the course of the reparative process in bone fractures and the influence of mechanical factors on bone formation.
4. Stages of callus formation.
5. The concept of ununited fracture, etiology, diagnostic methods.
6. Treatment of non-united fractures
7. The concept of pseudarthrosis, etiology, diagnostic method, treatment.
8. Determination of gypsum quality.
9. Installation of a plaster cabinet.
10. Basic rules for applying plaster casts.
11. Plaster casts for injuries of the upper limb.
12. Plaster casts for injuries of the lower limb.
13. Diaphyseal fractures of the humerus. The advantage of the Ilizarov method in the treatment of fractures of this location.
14. Shoulder injury. Fracture of the surgical neck of the humerus.
15. Fractures of the proximal humerus.
16. Shoulder dislocations.
17. Traumatic shoulder dislocations: classification, clinical picture, methods of reduction.
18. Clavicle fractures. Diagnosis, treatment.
19. Clavicle fractures. Diagnosis, treatment.
20. Surgical treatment of clavicle fracture, methods of osteosynthesis of clavicle fractures.
21. Scapula fractures. Classification, clinic, diagnosis, treatment.
22. Rib fractures. Clinic, diagnosis, treatment of rib fractures.
23. Chest contusion. Diagnosis, treatment.
24. Examination of a patient with chest injury.
25. Complications of chest injuries. Pneumothorax, hydrothorax.
26. Diaphyseal fractures of the humerus. The advantage of the Ilizarov method in the treatment of fractures of this location.
27. Shoulder injury. Fracture of the surgical neck of the humerus.
28. Fractures of the proximal humerus.
29. Fractures of the forearm bones: diagnosis and treatment.
30. Fracture of the olecranon. Treatment methods.
31. Fractures and dislocations of the bones of the forearm (Montaggi and Galiazzi) – diagnosis and treatment.
32. Fractures of the radius in a typical location: clinical presentation, diagnosis and treatment.
33. Fracture of the carpal bones of the first scaphoid: mechanism, clinic, treatment.
34. Fractures of the metacarpal bones, treatment methods.
35. Fractures of the pelvic bones. Mechanisms of injury. Treatment.

36. Clinical symptoms of various pelvic bone fractures.
37. Possible complications of pelvic fractures.
38. Fractures of vertebral bodies: clinical picture, diagnosis and treatment
39. Damage to the cervical spine (rotational subluxation of the atlas).
40. Damage to the thoracic spine
41. Compression fractures of the lumbar spine (determining the degree of compression).
42. Ankle fractures, ankle ligament damage.
43. Diaphyseal fractures of the lower leg bones - diagnosis, treatment.
44. Diagnosis of sprains and damage to ankle ligaments.
45. Ankle fractures, diagnosis and treatment.
46. Treatment of tibia fractures using the Ilizarov method .
47. Surgical treatment, methods of osteosynthesis of tibia fractures.
48. Clinic, diagnosis and treatment of femoral neck fractures.
49. Fractures of the femoral diaphysis, treatment methods.
50. Fractures of the proximal end of the femur.
51. Treatment of hip fractures using the Ilizarov method .
52. Damage to the knee joint.
53. Patella fractures. Types of fractures, treatment.
54. Ankle fractures, ankle ligament damage.
55. Fractures of the talus and calcaneus. Diagnosis and treatment
56. Foot injuries, heel bone fracture. Diagnostics treatment.
57. Fractures of the metatarsal bones and phalanges of the fingers.

List of situational tasks

Situational task No. 1

An 82-year-old woman picked up a 20-liter pan filled with liquid from the floor and placed it on the gas stove. At the moment of lifting the pan, something crunched in her spine “somewhere below the shoulder blades” and severe pain appeared in the area of the injury. She did not seek medical help; she rubbed her back with turpentine herself and lay on her back. The acute symptoms have passed. Two days after this, I stood outside for a long time in cold weather. She was very cold. I came home and couldn’t get warm for a long time. Pain in the lower thoracic spine reappeared. I contacted my local therapist. A diagnosis was made - lumbosacral radiculitis. Rubbing was prescribed. The patient carefully followed the instructions, but her condition gradually worsened. I was bothered by constant pain in the spine when walking, which only stopped when lying on my back. Walking gave her great pain. This went on for 9 months. Finally, at the insistence of her relatives, she underwent an X-ray examination of her spine, after which she was hospitalized at a TB clinic. Upon external examination of the lower thoracic spine, there is a noticeable protrusion of the spinous processes of the IX and X thoracic vertebrae. Tapping the spinous processes of these vertebrae with your fingers is painful. Movements in the lower thoracic spine are limited. Full sensitivity and motor function of the lower extremities. The function of the pelvic organs is not impaired.
What is the diagnosis? What additional research needs to be done? What treatment should be prescribed?

STANDARD ANSWER: Take an x-ray of the thoracic spine, magnetic resonance - imaging, and laboratory tests. Considering the elderly age of the patient, carry out conservative treatment using tuberculostatic drugs. Place the patient on a bed with a shield and a hard mattress. Prescribe strict bed rest with careful individual care

Situational task No. 2

A teenager hit a sports equipment with his right hand during physical education classes at school. I went to the trauma center. Objectively: there is a subcutaneous hematoma on the dorsal surface of the middle phalanx of the third finger of the right hand . The finger is swollen and painful when touched. Flexion is limited. The skin is not damaged. The load along the axis of the finger is painless.
What is your diagnosis? What additional research needs to be done? What is the treatment strategy?

STANDARD ANSWER: Contusion of the middle phalanx of the third finger of the right hand. To exclude a fracture, take an x-ray of the third finger of the right hand. To ensure rest, place a plaster splint on the finger. Bend your finger slightly. Apply cold to the finger on the 1st day after the injury, and heat (baths, paraffin) on the 2nd day. Recommend UHF therapy and physical therapy.

Situational task No. 3

A 36-year-old man, while driving a car, collided with a truck on the highway at night. As a result of the collision, he was pressed tightly against the seat by the steering wheel. People nearby tried to remove the driver from the car. Their inept and hasty actions led to severe spinal injury. The victim was taken to the hospital's spinal center. I am worried about burning pain in the thoracic spine. Objectively: movements in the spine are constrained. In the lower thoracic spine there is swelling, subcutaneous hematoma, increased thoracic kyphosis. The protrusion of the spinous processes of the X - XI thoracic vertebrae is noted . Palpation of the spinous processes at the level of damage is painful. Motor and sensory functions of the legs are absent. The function of the pelvic organs is impaired.
What is your diagnosis? What additional research needs to be done? What is the treatment strategy?

STANDARD ANSWER: Closed compression fracture of the bodies of the X-XI thoracic vertebrae with complete rupture of the spinal cord.
It is necessary to do an X-ray examination of the spine, magnetic resonance imaging, lumbar puncture with examination of the cerebrospinal fluid. Place the patient on his back on a bed with a shield and a hard mattress. Carry out a gradual reposition of the damaged vertebrae. To do this, place a cushion under the lower back (the area of physiological lordosis). Simultaneously with reposition, exercise therapy, massage and physiotherapy should be carried out. The patient must be carefully cared for (prevention of bedsores and congestive pneumonia), monitor timely emptying of the bladder and intestines. The victim should be regularly monitored by a neurologist.

Situational task No. 4

Male 38 years old. Is intoxicated. I am concerned about slight pain in the left shoulder, the inability to use the left upper limb, and the presence of pathological mobility in the shoulder. Injury today at about 7:40 p.m., I went to a spring while intoxicated (I drank about 0.5 liters of vodka) (there was ice), slipped and fell. Friends called the ambulance team, whose employees immobilized him with Kramer's Turner splints , and the patient was taken to the emergency room of the trauma center . In the emergency room, blood pressure is 110/70 mm Hg , pulse is 80 per minute. The patient is intoxicated and does not remember what happened to him. Local status. Inspection after removal of immobilization. Deformation, pathological mobility of the diaphysis

of the humerus. The hand “hangs”; abduction of the first finger is impossible. There is no 15 active extension in the wrist and metacarpophalangeal joints. It is impossible to clench the hand into a fist. An X-ray of the left humerus in a direct projection reveals a helical fracture of the diaphysis of the left humerus at the border of the middle - lower third. The patient was hospitalized in the trauma department.

Questions. What diagnosis is most likely for this patient? Justify your diagnosis. Draw up and justify the examination plan. Create a treatment plan for this patient during hospitalization and on the ward. Your recommendations for discharge.

STANDARD ANSWER: Diagnosis. Closed screw-shaped fracture of the diaphysis of the left humerus at the border of the c/3-n/3, complicated by damage to the radial nerve. Rationale for diagnosis. The diagnosis is made on the basis of anamnesis, complaints, objective data and X-ray data. Additional examination plan. Prepare for surgery. PAC, blood group, PAM, CG, blood biochemistry, RW, blood for hepatitis B and C. Consultation with a neurologist, additional examination , preparation for surgery as planned. Treatment plan. In the emergency room - blockade according to Böhler , immobilization with a plaster cast according to Turner . In the department - osteosynthesis of the humerus with a plate, revision of the radial nerve, in case of damage, suture of the nerve. Recommendations for discharge: 1. Deso -type orthosis on the left upper limb, control radiograph after 10 weeks, then deciding on the possibility of axial loading. 2. Exercise therapy constantly. 3. To restore the nerve: in courses (at least three) for 10 days with an interval of 10 days: prozerin 1.0+ B1 – 1.0 + dibazol 1 table. 4. Observation by a surgeon and neurologist at the place of residence.

Situational task No. 5

A 60-year-old woman was taken by an ambulance team to the emergency room on an emergency basis. Complaints of sharp pain in the left thigh, worsening with the slightest movement, inability to use the left lower limb. According to the patient, she was injured this morning - she slipped in the courtyard of her house, fell on her left leg from the height of her height, immediately felt a sharp pain, called an ambulance, which took her to the emergency traumatology department. History of childhood infections, colds, episodes of increased blood pressure up to 170/100 mm. Hg Art., periodic pain in the heart area. The condition is satisfactory. The skin has a physiological color. In the lungs, breathing is vesicular, heart sounds are rhythmic, heart rate is 76 beats per minute, working blood pressure is 150/80 mm. Hg Art., physiological functions are normal. Local status. During examination, the patient lies on a gurney. Skin without damage. The left thigh is breeches-like deformed. The left lower limb is somewhat shortened. In the upper third of the left thigh there is an extensive bruise, 15x10 cm, 17 burgundy in color. On palpation, sharp pain in the upper third, swelling +3.0 cm, crepitus of fragments, pathological mobility, positive symptom of “axial load” along the axis of the left thigh. The range of motion in the left hip and knee joints is severely limited due to pain. No sensory or motor disorders were identified. Pulsation in the arteries of the left foot is detected.

Questions. What diagnosis is most likely for this patient? Justify your diagnosis. Draw up and justify the examination plan. Create a treatment plan for this patient during hospitalization and on the ward. Your recommendations for discharge depending on the method of osteosynthesis.

STANDARD ANSWER: Diagnosis. Closed fracture of the upper third of the left femur with displacement of fragments. Rationale for diagnosis. The diagnosis was made based on complaints - sharp pain in the left thigh, worsening with the slightest movement, inability to use the left lower limb. Based on the anamnesis: falling on the left leg from the height of one's height, immediately feeling a sharp pain; skin without damage. The left hip is deformed. The left lower limb is somewhat shortened. In the upper third of the left thigh there is an extensive bruise, 15x10 cm, burgundy in color. On palpation, sharp pain in the upper third, swelling +3.0 cm, crepitus of fragments, pathological mobility, positive symptom of "axial load" along the axis of the left thigh. The range of motion in the left hip and knee joints is severely limited due to pain. Survey plan. X-ray of the left femur in two projections. Prepare for surgical treatment: PAC, PAM, CG, blood biochemistry, RW, blood for hepatitis B and C, ECG, blood pressure control, consultation with a therapist, cardiologist. Ultrasound of the veins of the lower limb Treatment plan. In the emergency room, pain relief is provided by Beler blockade (Novocaine 1-2% 10-20 ml). Skeletal traction for the tibial tuberosity is 1/7 of body weight. 39 Surgical treatment as planned (in the absence of contraindications) – osteosynthesis of the left femur with a locking rod or plate. 2. Anticoagulants, Analgesics, Hemorheological drugs, Antibiotics, infusion therapy before and after surgery 3. Exercise therapy. Recommendations for discharge: 1. Continue outpatient treatment in the clinic. 2. Walking on crutches without load on the left leg (with osteosynthesis with a plate), with a dosed load (with osteosynthesis with a locked rod) until the fracture heals 3. X-ray control after 3, 6, 8 months. 4. Exercise therapy, massage 5. Tablet anticoagulants (for example, Xarelto 10 mg once a day) 1 month after discharge, then antiplatelet agents (for example, Acecardol 100 mg once a day) for 6 months.

SAMPLE QUESTIONS FOR THE EXAM (9th semester)

The EXAM tasks include assessment of theoretical knowledge and assessment of practical skills - the examination card contains 3 questions (2 theoretical and 1 situational task).

Questions for oral questioning:
"Traumatology and Orthopedics"

1. Examination methods in traumatology.
2. Bone fractures.
3. Types of fractures, morphological changes in the area of injury, general principles of treatment.
4. Determination of gypsum quality.
5. Basic rules for applying plaster casts.
6. Plaster casts for injuries of the upper limb.
7. Plaster casts for injuries of the lower limb.
8. Features of the course of the reparative process in bone fractures and the influence of mechanical factors on bone formation.
9. Classification of blood vessel injuries.
10. Methods for diagnosing damage to blood vessels.
11. treatment of blood vessel damage.
12. Traumatic shock.

13. Rehabilitation of patients with damage to blood vessels.
14. Anti-shock measures for injuries.
15. Methodology for examining orthopedic patients.
16. Clinical forms of traumatic brain injury.
17. Brain concussion
18. Rib fractures. Treatment of rib fractures.
19. Scapula fractures. Classification, clinic, treatment.
20. Fractures and dislocations of the bones of the forearm (Montaggi and Galiazzi) – diagnosis and treatment.
21. Fracture of the olecranon. Treatment methods.
22. Dislocations of the forearm, mechanism of occurrence, methods of reduction
23. Diaphyseal fractures of the humerus. The advantage of the Ilizarov method in the treatment of fractures of this location.
24. Shoulder injury. Fracture of the surgical neck of the humerus.
25. Fractures of the proximal humerus.
26. Fractures of the forearm bones: diagnosis and treatment.
27. Diaphyseal fractures of the forearm bones. Conservative and surgical treatment.
28. Fractures of the radius in a typical location: clinical presentation, diagnosis and treatment.
29. Fracture of the carpal bones of the first scaphoid: mechanism, clinic, treatment.
30. Fractures of the metacarpal bones, treatment methods.
31. Dislocations and fractures of the fingers.
32. Traumatic hip dislocations.
33. Clinic, diagnosis and treatment of femoral neck fractures.
34. Fractures of the femoral diaphysis, treatment methods.
35. Fractures of the pelvic bones. Mechanisms of injury. Treatment.
36. Patella fractures. Types of fractures, treatment.
37. Ankle fractures, ankle ligament damage.
38. Shoulder dislocations.
39. Traumatic shoulder dislocations: classification, clinical picture, methods of reduction.
40. Diaphyseal fractures of the lower leg bones - diagnosis, treatment.
41. Damage to the menisci of the knee joint (diagnosis for fresh and old injuries)
42. Fractures of the talus and calcaneus. Diagnosis and treatment
43. Foot injuries, heel bone fracture. Diagnostics treatment.
44. Diagnosis of sprains and damage to ankle ligaments.
45. Ankle fractures, diagnosis and treatment.
46. Fractures of the metatarsal bones and phalanges of the fingers.
47. Foot injuries, heel bone fracture. Diagnostics treatment.
48. Fractures of the talus, diagnosis and treatment.
49. Features of tendon restoration, types of tendon sutures
50. Fractures of the proximal end of the femur.
51. Fractures of vertebral bodies: clinical picture, diagnosis and treatment
52. Clavicle fractures. Diagnosis, treatment.
53. Clinical symptoms of congenital hip dislocation in children older than one year.
54. Osteochondropathy of the II – III metatarsal bones (Keller's disease II)
55. osteochondropathy - Scheuermann - Mau disease . Diagnosis, treatment
56. Osteochondropathy of the tibial tuberosity (Osgood – Schlatter)
57. Osteochondropathy of the femoral head (Legg – Calvé – Perthes disease).
58. Osteochondropathies and pathomorphology using the example of Perthes disease
59. Muscular torticollis: diagnosis, treatment.
60. Treatment of dystrophic and atrophic processes in bones.
61. Modern view on the etiology and pathogenesis of dysplasia
62. Congenital hip dislocation. Conservative treatment.

63. Congenital clubfoot and its treatment.
64. Congenital hip dislocation, early symptoms and treatment.
65. Static deformities – kyphosis, scoliosis (diagnosis, treatment)
66. Scoliosis. Prevention and treatment.
67. Scoliosis. Etiology and treatment.
68. Flat feet, valgus deviation of the first toe, clinic, treatment
69. Osteochondrosis of the spine: etiology, pathogenesis, diagnosis and treatment.
70. Deforming arthrosis of the knee joint.
71. Deforming arthrosis of the hip joint. Treatment
72. Congenital torticollis
73. Intra-articular fractures of the knee joint.
74. Fractures of the scapula, clavicle. Diagnosis and treatment.
75. Types of flat feet. Treatment.
76. Osteogenic sarcoma.
77. Etiology, clinic of cerebral spastic palsy.

List of situational tasks

Situational task No. 1

A 36-year-old man, while driving a car, collided with a truck on the highway at night. As a result of the collision, he was pressed tightly against the seat by the steering wheel. People nearby tried to remove the driver from the car. Their inept and hasty actions led to severe spinal injury. The victim was taken to the hospital's spinal center. I am worried about burning pain in the thoracic spine. Objectively: movements in the spine are constrained. In the lower thoracic spine there is swelling, subcutaneous hematoma, increased thoracic kyphosis. The protrusion of the spinous processes of the X - XI thoracic vertebrae is noted . Palpation of the spinous processes at the level of damage is painful. Motor and sensory functions of the legs are absent. The function of the pelvic organs is impaired.
What is your diagnosis? What additional research needs to be done? What is the treatment strategy?

STANDARD ANSWER: Closed compression fracture of the bodies of the X-XI thoracic vertebrae with complete rupture of the spinal cord.
It is necessary to do an X-ray examination of the spine, magnetic resonance imaging, lumbar puncture with examination of the cerebrospinal fluid. Place the patient on his back on a bed with a shield and a hard mattress. Carry out a gradual reposition of the damaged vertebrae. To do this, place a cushion under the lower back (the area of physiological lordosis). Simultaneously with reposition, exercise therapy, massage and physiotherapy should be carried out. The patient must be carefully cared for (prevention of bedsores and congestive pneumonia), monitor timely emptying of the bladder and intestines. The victim should be regularly monitored by a neurologist.

Situational task No. 2

A young woman walked on a log and, having fun, threw a 4-year-old child in her arms.
During a careless movement, the child fell from his arms and hit his back on a log. The mother and child did not seek qualified help . Only six months later the boy was taken to a specialized medical institution. The child is bothered by constant pain in the area of injury. He has poor sleep and decreased appetite. Movements in the lumbosacral spine are limited. The child cannot stand straight for a long time, but is forced to rest his hands on his hips. Upon external examination, attention is drawn to the protrusion of the spinous processes of the III, IV and V lumbar vertebrae, which formed the gibbus . When you tap the spinous

processes of these vertebrae with your fingers, pain is noted. Pain in the lumbar spine when pressing with the palm of your hand on the head. Sensory and motor functions in both lower extremities are fully preserved.
What is your diagnosis? What additional research needs to be done? What is the treatment strategy?

STANDARD ANSWER: Tuberculous spondylitis of the III , IV and V lumbar vertebrae. It is necessary to do an X-ray of the lumbosacral spine, magnetic resonance imaging, and laboratory tests. The child should be recommended long-term strict bed rest in a sanatorium-resort environment, including the use of air and sun baths (aeroheliotherapy) . The affected part of the spine must be provided with rest using a plaster bed. To correct the deformity and prevent the hump from enlarging, place a thick cotton-gauze roll under it in the shape of a cross. Prescribe tuberculostatic drugs . Subsequently - radical necrectomy of the lumbar vertebrae affected by the tuberculous process.

Situational task No. 3

An 82-year-old woman picked up a 20-liter pan filled with liquid from the floor and placed it on the gas stove. At the moment of lifting the pan, something crunched in her spine "somewhere below the shoulder blades" and severe pain appeared in the area of the injury. She did not seek medical help; she rubbed her back with turpentine herself and lay on her back. The acute symptoms have passed. Two days after this, I stood outside for a long time in cold weather. She was very cold. I came home and couldn't get warm for a long time. Pain in the lower thoracic spine reappeared. I contacted my local therapist. A diagnosis was made - lumbosacral radiculitis. Rubbing was prescribed. The patient carefully followed the instructions, but her condition gradually worsened. I was bothered by constant pain in the spine when walking, which only stopped when lying on my back. Walking gave her great pain. This went on for 9 months. Finally, at the insistence of her relatives, she underwent an X-ray examination of her spine, after which she was hospitalized at a TB clinic. Upon external examination of the lower thoracic spine, there is a noticeable protrusion of the spinous processes of the IX and X thoracic vertebrae. Tapping the spinous processes of these vertebrae with your fingers is painful. Movements in the lower thoracic spine are limited. Full sensitivity and motor function of the lower extremities. The function of the pelvic organs is not impaired.
What is the diagnosis? What additional research needs to be done? What treatment should be prescribed?

STANDARD ANSWER: Take an x-ray of the thoracic spine, magnetic resonance imaging, and laboratory tests. Considering the elderly age of the patient, carry out conservative treatment using tuberculostatic drugs. Place the patient on a bed with a shield and a hard mattress. Prescribe strict bed rest with careful individual care

Situational task No. 4

A 10-year-old child fell from the roof of a barn and hit his back. After some time, he became lethargic, inactive, and stopped playing outdoor games with his peers. Fatigue has increased. Constant pain appeared in the spine, intensifying in the evening, especially after physical activity. In order to unload the spine, the child began to walk, resting his hands on his hips. Gradually my posture began to change. In the upper thoracic spine, the hump began to protrude more and more noticeably. The chest deformity increased in the front as well. The child's parents lived in rural areas and did not seek qualified help. For a whole year the disease progressed without any intervention, until the child developed paralysis of both

lower extremities. After this, the seriously ill child was brought to the city and hospitalized. Upon external examination of the spine, there is a hump-shaped curvature in the upper thoracic region. Tapping on the spinous processes of the IV, V and VI thoracic vertebrae is painful. The movements of the spine in the thoracic region are limited: the child turns with his whole body, instead of bending forward, he squats. The patient developed spinal disorders: motor paralysis with painful cramps of both lower extremities and sensitivity disorders, foot clonus and pathological reflexes, involuntary constant urination.
What is the diagnosis? What additional research needs to be done? What is the treatment strategy?

STANDARD ANSWER: Tuberculous spondylitis of the III , IV and V lumbar vertebrae. It is necessary to do an X-ray of the lumbosacral spine, magnetic resonance imaging, and laboratory tests. The child should be recommended long-term strict bed rest in a sanatorium-resort environment, including the use of air and sun baths (aeroheliotherapy) . The affected part of the spine must be provided with rest using a plaster bed. To correct the deformity and prevent the hump from enlarging, place a thick cotton-gauze roll under it in the shape of a cross. Prescribe tuberculostatic drugs . Subsequently - radical necrectomy of the lumbar vertebrae affected by the tuberculous process.

Situational task No. 5

A 50-year-old man worked at a slop court . While going down the steep stairs into the hold, he stumbled, fell and hit his back on the steps. I was worried about pain in the thoracic spine. And for several months he went to medical institutions, where various diagnoses were made (bilateral intercostal neuralgia, pleural and pulmonary diseases), and appropriate treatment was prescribed. There was no improvement. The disease progressed. Six months later, at a regional hospital, he underwent a magnetic resonance imaging scan and was sent to a spinal center. Upon admission to the hospital, she was bothered by severe pain in the thoracic spine, of a constant nature, aggravated by walking, fatigue, and loss of appetite. On external examination of the patient: smooth physiological curves, poor posture, flattened back, careful, measured gait. The spinous processes of the VI and VII thoracic vertebrae protrude somewhat and are painful when tapped with fingers. Pain in these vertebrae is also observed when the palms of the hands are pressed on the patient's shoulders, i.e., when there is a load along the axis of the spine. Full sensitivity and motor function of the lower extremities. The function of the pelvic organs is not impaired.
What is the diagnosis? What additional research needs to be done? What is the treatment strategy?

STANDARD ANSWER: Tuberculous spondylitis of the VI and VII thoracic vertebrae.
It is necessary to do an X-ray examination of the spine, magnetic resonance imaging, laboratory tests of blood, urine, Mantoux and Pirquet tests, and strict bed rest on a hard bed with a shield. To unload the spine, it should be placed in a plaster bed. Prescribe anti-tuberculosis drugs. Consultation with a neurologist is necessary. In the future, a radical necrectomy of the thoracic vertebrae affected by tuberculosis should be performed.

Situational task No. 6

The girl hit her buttocks, sitting past the chair. She went to the trauma center with complaints of pain in the coccyx area, which intensified when the patient sat down or rose from a chair. To reduce pain, she sits and stands up from a chair, leaning on her hands. Upon external examination, there is a small hematoma in the coccyx area; palpation of this area is painful. No other visible changes were found.
What is your diagnosis? What additional research needs to be done? What treatment should

be prescribed?

STANDARD ANSWER: Take an x-ray of the coccyx. Treatment is conservative, aimed at relieving pain in the area of injury. Rub NSAIDs locally, NSAIDs internally.

Situational task No. 7

The young man went to the trauma center with a complaint of pain in the left hand. The patient was hit hard on the palm of his hand with a heavy, blunt metal object. Upon examination, the palmar surface of the left hand is swollen, painful when palpated, the fingers are in a bent position, and movements are limited. Cannot fully clench fingers into a fist. The skin of the hand is not damaged.
What is the diagnosis? What additional research needs to be done? What is the treatment strategy?

STANDARD ANSWER: Contusion of the palmar surface of the left hand.
To exclude a fracture, do an x-ray of the hand. The victim should constantly apply cold (ice pack) during the first 24 hours. Immobilize the hand with a dorsal plaster splint from the fingertips to the middle of the forearm. Give your fingers a half-bent position. Hang the brush on a scarf. Bend your arm at the elbow joint at a right angle. Prescribe painkillers (analgin, baralgin). From the 2nd day, prescribe thermal procedures (warm bath, heating pad, heating pad) and alcohol-oil compresses on the palm. In the future , carry out passive and active gymnastics for the fingers, UHF therapy

.

Situational task No. 8

The girl turned to the trauma center with a request to remove the ring from her finger, which was causing great inconvenience. I am concerned about a feeling of pressure and pain in the fourth finger of the left hand. Objectively: a metal ring is tightly placed on the main phalanx of the fourth finger of the left hand. Below the ring, the finger is swollen and somewhat bluish. Due to swelling, movement is limited. Sensitivity is fully preserved.
What is the diagnosis? How to remove the ring?

STANDARD ANSWER: Compression of the fourth finger of the left hand by the ring.
Pass a thick silk thread (No. b or No. 8) about 1.5 m long using a thick curved needle and a needle holder under the ring from the side of the nail phalanx. Hold the end of the silk, 20-25 cm long, brought out from under the ring with a clamp. Lubricate the patient's finger below the ring with Vaseline. Wrap the long end of the silk thread tightly around your finger in spiral rounds, tightly adjacent turn to turn. The coils should go from the ring to the nail phalanx, where the silk should be tied. Bend the short end of the thread, held by the clamp, through the ring and pull it tight. The untwisted thread presses on the ring and gradually moves it to the nail phalanx, where it can be freely removed from the finger

Situational task No. 9

The man was hammering a nail into the wall and hit the nail phalanx of the second finger with a hammer, treating the i hand. I went to the trauma center < complaining of pain at the site of injury. Objectively, the nail phalanx of the second finger is swollen and painful when palpated. In the center of the nail plate there is a subungual hematoma of a purplish-bluish color, oval in shape, about 1 cm in size. The nail does not peel off.
What is the diagnosis? What additional research needs to be done? What is the treatment

strategy?

STANDARD ANSWER: Subungual hematoma of the second finger of the left hand.
In order to exclude a fracture, it is necessary to take an x-ray of the second finger of the left hand. The hematoma is removed surgically. Pre-treat the nail plate with an antiseptic. Then you should heat a straight needle clamped in a needle holder in a spirit lamp. They touch the nail with a hot needle and burn it. The accumulated blood flows out of the resulting hole. After this, the patient's feeling of fullness decreases and relief quickly occurs. Apply an aseptic bandage to the finger. Prescribe UHF therapy.

Situational task No. 10

A teenager hit a sports equipment with his right hand during physical education classes at school. I went to the trauma center. Objectively: there is a subcutaneous hematoma on the dorsal surface of the middle phalanx of the third finger of the right hand . The finger is swollen and painful when touched. Flexion is limited. The skin is not damaged. The load along the axis of the finger is painless.
What is your diagnosis? What additional research needs to be done? What is the treatment strategy?

STANDARD ANSWER: Contusion of the middle phalanx of the third finger of the right hand.
To exclude a fracture, take an x-ray of the third finger of the right hand. To ensure rest, place a plaster splint on the finger. Bend your finger slightly . Apply cold to the finger on the 1st day after the injury , and heat (baths, paraffin) on the 2nd day. Recommend UHF therapy and physical therapy.

Situational task No. 11
The teenager's right hand got caught in a moving machine during agricultural work. As a result of injury to the nail phalanx
III finger crushed. On the same day I went to the trauma center. Upon external examination of the fourth finger of the right hand, the nail phalanx was crushed. The skin in this area is torn. The wound is heavily contaminated with soil and technical grease. When palpating the nail phalanx, crushed small bone fragments are felt under the skin. There is little bleeding from the laceration.
What is your diagnosis? What are the tactics?

STANDARD ANSWER: Dissection of the superficial and deep tendons of the flexor tendon of the third finger of the right hand . Treat the skin around the wound with an antiseptic (Novosept , iodonate , chlorhexidine). Apply local anesthesia with a 0.5% novocaine solution. Wash the wound with furatsilin, rivanol or hydrogen peroxide. Find the ends of the flexor tendons (superficial and deep) in the depths of the wound and sew them with thin silk with an intra-stem (non-removable) suture. Bring the edges of the skin wound closer together and sew up tightly. After the operation , the hand and lower third of the forearm are fixed with a dorsal plaster splint in the average physiological position of the fingers and hand. It is necessary to get a tetanus vaccination. During the first 6-8 days, prescribe UHF therapy to reduce swelling and pain .

Situational task No. 12

A 6-year-old child limps on his right leg. On examination: the limb is shorter than the left. The greater trochanter is located above the Roser-Nelaton line 3 см, hip abduction is limited. Dupuytren's symptoms and non-vanishing pulse are negative. Trendelenburg's sign is weakly positive. On the radiograph on the right, the head of the femur is in the socket, the neck-diaphasic angle is 90^0.

Your conclusion about the pathology .

STANDARD ANSWER: Taking into account the radiological data: the head of the femur is located in the socket, and the neck-diaphasic angle is 90^o, a diagnosis of " varus deformity of the femoral neck" can be made, despite the commonality of symptoms with congenital dislocation of the hip: shortening of the left leg, location of the greater trochanter above the Roser-Nelaton line , limitation of hip abduction. Clinical difference from dislocation: negative Dupuytren's symptoms and non-disappearing pulse.

Situational task No. 13

A 4-year-old girl falls on her left leg. On examination: the limb is shortened. The greater trochanter is located 3 cm above the Roser-Nelaton line , mild atrophy of the muscles of the thigh and gluteal group, limited hip abduction, positive Trendelenburg sign . On the presented radiograph, the acetabulum is empty, shallow, the upper edge is smoothed. The head of the femur is located in the supraacetabular region. The neck-diaphasar angle is 140^0.
Make a diagnosis and prescribe treatment.

STANDARD ANSWER: The child has a congenital dislocation of the left hip. Clinical signs: shortening of the limb, limited abduction of the hip, high condition of the greater trochanter - are confirmed by radiological symptoms: the acetabulum is empty and shallow, its upper edge is beveled, the head of the femur is outside the cavity. Taking into account the age, the doctor should prescribe surgical reduction of the hip with deepening of the acetabulum.

Situational task No. 14

The mother brought the child at the age of 1.5 months to the orthopedic office. Upon examination, asymmetry of the femoral folds and limited hip extension were revealed. There is no shortening of the leg or clicking symptom.

Is it advisable to do diagnostic radiography of the hip joints at this age? Your treatment tactics.
STANDARD ANSWER: Based on the asymmetry of the femoral folds and limited hip extension, hip dysplasia can be suspected. It is premature to conduct an X-ray examination at 1.5 months of age, since reading the X-ray is difficult due to the absence of ossification nuclei of the femoral heads.

Doctor's tactics: prescribe LVK to deepen the acetabulum (flexion-extension and rotational movements) and free swaddling. A thickened crotch pad can also be recommended. Repeated examination at the age of 3 months, X-ray examination as indicated (maintaining limited hip extension).

Situational task No. 15

The child is 4.5 months old. There is marked asymmetry of the femoral folds, shortening of the right leg, limited hip abduction, and a positive clicking symptom. On the radiograph, the roof of the acetabulum is smoothed, the head of the femur is smaller on the right and is located 1.5 cm above the upper edge of the cavity. Your diagnosis and treatment tactics, rationale.
STANDARD ANSWER: The child has a dislocation of his right hip. Treatment – exercise therapy, fixation of the limbs on a splint, for example, CITO, massage of the legs and buttocks

Situational task No. 16

A 3-year-old child has congenital clubfoot. When trying to remove the foot from a vicious position, tissue rigidity is noted along the posteroinner edge of the foot.
What intervention should be performed to correct the deformity?
STANDARD ANSWER: You can perform the Zatsepin operation on the tendon-ligamentous apparatus of the foot, followed by wearing orthopedic shoes for a year.

Situational task No. 17

The patient, 37 years old, complains of pain and limitation of movements in the left hip joint. At the age of seven, she underwent open reduction surgery for a congenital hip dislocation. On examination: the left limb is 2 cm shorter than the right, the muscles of the thigh and lower leg are atrophic , movements in the hip joint are limited, abduction is painful. The x-ray shows deformation of the hip joint, the articular surfaces are elongated, there are osteochondral exostoses at the edges, and the joint space is narrowed.
What complication developed after surgical reduction of a hip dislocation? What treatment recommendations can be given to the patient?
STANDARD ANSWER: After open reduction of a congenital hip dislocation, the patient developed secondary deforming coxarthrosis. Treatment is conservative: unloading of the limb, exercise therapy, massage, physiotherapy, drug treatment. If there is no effect from long-term conservative and sanatorium-resort treatment, surgical treatment can be offered. A good effect is achieved by decompressive intertrochanteric automyoosteoplasty according to A.F. Krasnov.

Situational task No. 18

The child is 1 year old. Previously he was treated for left-sided clubfoot with corrective plaster casts. However, the foot deformity has not been completely eliminated; he walks on the outer edge of the foot.

On examination: the heel is pulled up , the foot is completely removed from the position of varus and adduction.
What mistake was made at the previous stage of treatment and how to correct it?
STANDARD ANSWER: The most common mistake made during the staged treatment of congenital clubfoot is incomplete elimination of equinus , which subsequently disrupts the correct alignment of the foot when walking. The stability of the foot is disrupted, it turns inward, and clubfoot relapses. In this observation, it is necessary to perform a subcutaneous achillotomy and apply a corrective plaster cast for 6-8 weeks. The bandage is then replaced with a removable plaster cast to maintain the correct position of the foot. Exercise therapy, foot massage, warm

foot baths, and orthopedic shoes are prescribed for up to a year. Observation by an orthopedist is required for the next three years.

Situational task No. 19

A 5-year-old child has congenital flat-valgus feet. The mother notes that the boy walks poorly and clumsily, runs even worse, gets tired quickly, and in the evening complains of pain in the feet and knee joints. Previously, they had not contacted an orthopedic doctor.

Prescribe treatment according to the disease and age.
STANDARD ANSWER: Taking into account the age of the child, conservative treatment should be prescribed: exercise therapy to strengthen the leg muscles, tonic massage, electrical stimulation of the muscles of the tibial group, finger flexors, plantar muscles of the foot, salt-pine foot baths, night corrective splints, orthopedic boots with high and hard backs , and for modeling the arch - with an instep support.

Situational task No. 20

A 1 month old child with a diagnosis of neck lymphadenitis was sent for consultation to an orthopedist. From the anamnesis it was revealed that the mother's birth was difficult, the child was born in a breech position .

On examination, there is a slight tilt of the head to the right. In the area of the lower third of the right sternocleidomastoid muscle, a tumor-like formation measuring 2x1.5 cm, painless, of dense elastic consistency without signs of inflammation, is determined.
What disease does the child have, what recommendations should you give?

STANDARD ANSWER: The child has congenital muscular torticollis. After discharge from the maternity hospital, the following should be recommended: heat to the area of the sternocleidomastoid muscle, corrective exercises for the head, special positioning of the child.

Situational task No. 21

In a 4-year-old child, the head is tilted to the right and is held in this position by the shortened sternocleidomastoid muscle. The skull and face are asymmetrical. The right shoulder girdle is higher than the left. Full flexion-extension movements in the cervical spine, limited tilt of the head to the left. No pain.

Make a diagnosis and prescribe treatment.
STANDARD ANSWER: Congenital muscular torticollis. Considering the age of the child, the treatment is surgical – lengthening plastic surgery of the right sternocleidomastoid muscle.

The exam ticket contains: 2 theoretical questions and 1 situational task.

The results of the intermediate knowledge control are assessed: "excellent", "good", "satisfactory", "unsatisfactory".