**Topic 1: General basic of Medical Rehabilitation**

**Case study №1**

A 46-years-old woman fell ill acutely. 6 days after the flu, there was a feeling of constriction in the left side of the face and pain in the cervical region. The next morning, she saw a twisted face. When contacting the clinic, a neurologist diagnosed her with neuritis of the facial nerve on the left. A referral to the hospital was given. The patient was admitted to the neurology department the same day.

1. When is it appropriate to start rehabilitation measures?

2. Determine the motor mode of the medical rehabilitation (MR).

3. What MR methods are used for this pathology at the outpatient stage?

4. What are the tasks of the metabolic stage?

5. Who determines the indications for massage?

**Case study №2**

A 33-years-old woman fell ill acutely. She complains of headache, dizziness when turning in the cervical region. When contacting a neurologist, it was prescribed: NSAIDs, vitamins, vascular treatment. During the ongoing therapy for 10 days, there was negative dynamics in the patient’s state. Complains of sleep disturbance. On examination, she was tearful, asthenic, and began to worry about prosthetic teeth.

1. Describe the tactics of a neurologist.

2. Where should medical rehabilitation take place?

3. Means of medical rehabilitation at this stage.

4. Principles of medical rehabilitation.

5. On the basis of what document is a rehabilitation diagnosis made?

**Case study №3**

A 27-years-old patient, diagnosis: Trigeminal neuralgia, lesions of the 1st, 2nd, 3rd branches on the left. In medical history: for 3 months, since November, periodic shooting pains in the face on the left began to disturb, provoked by talking, eating. Over the past 2 weeks, paroxysmal pain has become more frequent.

1. At what stage is it recommended to carry out rehabilitation measures?

2. What methods can be used in a medical rehabilitation program?

3. At what stage is it advisable to start medical rehabilitation?

4. Is it advisable to recommend a sanatorium-resort stage to a patient?

5. Who determines the indications for massage at the outpatient stage?

**Case study №4**

A 58-years-old woman complains of T-38.5, a dry, frequent cough that is worse when lying down. She fell ill 3 weeks ago: T-37.2 appeared, headache, runny nose. On the background of treatment with Nazivin, paracetamol, the condition improved on the 6th day. A week after recovery, she underwent hypothermia (waiting for a bus for 40 minutes). The next day notes a sharp dry cough, headache, shortness of breath, T-38.9. A neighbor recommended a course of amoxicillin. With self-medication, the temperature lasts for 3 days 37.8, cough does not give rest at night. She called for an ambulance.

1. At what stage should medical rehabilitation activities begin?

2. What principles of medical rehabilitation are acceptable here?

3. Who determines the indications for massage in a hospital?

4. Who determines the rehabilitation diagnosis?

5. What means of medical rehabilitation are used at the inpatient stage?

**Case study №5**

A 57-years-old man was hospitalized two years ago for a diagnosis of spinal injury (fracture Th 10, 11), severe spastic lower paraparesis, pelvic disorders.

1. Determine the stage of medical rehabilitation.

2. Determine the objectives of this stage.

3. List the specialists of the rehabilitation team at the inpatient stage needed for this pathology.

4. Who determines the indications for massage?

5. What additional means of physical therapy (therapeutic physical culture) are indicated?

**Topic 2: International classification of functioning**

**Case study 1.**

Diagnosis: Consequences of a cerebral stroke with severe right-sided hemiparesis and mild motor aphasia. Accountant, female, 45 years old. There is a dependent son, 16 years old, suffering from cerebral palsy.

Make a rehabilitation diagnosis using the ICF system.

**Case study 2.**

Diagnosis: Discogenic (hernia L5 - S1) radiculoischemia L5 - S1 on the right with persistent severe pain syndrome, moderate muscular-tonic syndrome, severe extensor paresis.

Male, 52 years old, forklift driver. He lives with his family, has two children aged 14 and 17, his wife works.

Make a rehabilitation diagnosis using the ICF system.

**Case study 3.**

Diagnosis: Multiple sclerosis, cerebrospinal form, progredient-remitting course, 2nd degree of severity, with moderate oculomotor disorders, with moderate atactic syndrome, mild spastic paresis of the right hand.

A 30-year-old woman, watchmaker at the “Luch” factory.

Make a rehabilitation diagnosis using the ICF system.

**Topic 3: Clinical assessment in medical rehabilitation**

1. In an athlete during spirography, tidal volume (TV) = 900 ml is determined; RR=12 per min.

Question 1: Define minute ventilation;

Question 2: What formula is used to calculate minute ventilation?;

Question 3: Calculate minute ventilation;

Question 4: Normal indicators at rest;

Question 5: What should be taken into account when evaluating the results?;

2. A 55-years-old woman has a history of hypertension for 15 years. Regularly takes antihypertensive drugs. There are no complaints at the moment. Objectively: a patient with increased nutrition, height 165 cm, weight 70 kg, BMI=26, BP=135/85 mmHg, pulse=72 per minute.

Question 1: Determine the medical group of this patient;

Question 2: List the optimal means of exercise therapy;

Question 3: How many types of reactions to physical activity are there in total?;

Question 4: Specify the favorable type (recovery time) during the Martinet test;

Question 5: Specify the recovery time during the Letunov test in the norm;

3. A 22-year-old man, a student, has a history of chronic bronchitis with exacerbations 2-3 times a year for 4 years, childhood infections: chicken pox, rubella. Does not engage in physical education and sports. Has no bad habits. Objectively: height 187 cm, weight 65 kg, BMI=18.6, BP=110/70 mm Hg, PS=78, pale pink skin, asthenic build, shoulder blades 3 cm behind the chest, muscular corset is developed weakly, on examination revealed scoliotic posture

Question 1: Assess physical development;

Question 2: Define the medical group;

Question 3: What are your recommendations?;

Question 4: Choose the patient's preferred sport;

Question 5: How many medical groups are there? List them;

4. A 17-years-old woman, physically healthy. Makes no complaints. She has a history of appendectomy 5 years ago without complications. Bad habits are denied. Physical development is average, posture is correct. Has no sports history. Letunov's test: blood pressure before the test 120/80 mm Hg. Pulse 76.

1. Test with 20 squats in 30 seconds: 1st minute: Blood pressure: 180/70; pulse: 84. 2nd minute: BP: 140/70; pulse: 81. 3rd minute: BP: 120/80; pulse: 76.

2. 15 second run:1st minute: BP: 150/75; pulse: 93. 2nd minute: BP: 130/80; pulse: 84. 3rd minute: BP: 120/80; pulse: 75.

3. 3 minute run in place: 1st minute: BP: 170/80; pulse: 123. 2nd minute: BP: 130/70; pulse: 96. 3rd minute: BP: 120/70; pulse: 99.

Question 1: Determine the type of reaction;

Question 2: Identify adaptive opportunities;

Question 3: Recommended sports for this type of reaction;

Question 4: How many types of reactions to physical activity are there in total?;

Question 5: What is the recovery time for a Martinet test?;

5. A rugby player, 25 years old, height 181 cm, weight 88 kg has actual vital capacity (VC) equal 6000 ml.

Question 1: How to calculate normal VC using Anthony's formula?

Question 2: Calculate normal VC using Antonia's formula;

Question 3: Express the actual VC as a percentage of the expected value;

Question 4: Rate the results;

Question 5: What is the purpose of VC and normal VC calculation?

**Topic 4: Methods of medical rehabilitation**

**Case study№ 1**

A 39-years-old man suffered a right fibula condyle fracture 2 weeks ago. Plaster cast was applied. He is in outpatient treatment. Within a month, the patient is concerned about pain in the lumbar region.

**Tasks**

1. Is a massage currently indicated?

2. Is physical therapy indicated at this stage?

3. Is it possible to carry out physical therapy on the affected limb immediately after removing the cast?

4. Is it advisable to use breathing exercises for this injury?

5. What means of physical therapy are recommended to use after removing the cast?

**Case study№ 2**

A 27-years-old patient has a diagnosis: Trigeminal neuralgia, lesion of 1, 2, 3 branches on the left. In anamnesis: for 3 months, since November, periodic shooting pains in the left side of the face began to disturb, provoked by talking, eating. Over the past 2 weeks, paroxysmal pains have become more frequent.

**Tasks**

1. At what stage is it recommended to carry out rehabilitation measures?

2. What methods can be used in a medical rehabilitation program?

3. Who determines the indications for massage at the outpatient stage of treatment?

**Case study№ 3**

A 24-year-old woman was discharged from the hospital with a diagnosis of acute bronchitis. She has been suffering from bronchial asthma since childhood. Over the past year, she has noticed an increase in asthma attacks.

**Tasks**

1. Determine the stage of medical rehabilitation

2. What massage techniques will be more effective in this case?

3. What effect does physical therapy have on the respiratory system in this diagnosis?

4. What form of training should be applied to this patient at the outpatient stage?

5. What forms of physical therapy are indicated at this stage?

**Case study№4**

A 36-year-old woman bought a ticket to the sanatorium on her own. At a consultation with a therapist, it was established that for 6 years a gynecologist has been observed with a diagnosis of chronic adnexitis, exacerbations once a year; observed by a neurologist with vegetative-vascular crises up to 2 times a year; dental diseases: periodontitis and gingivitis.

**Tasks**

1. Are there indications for magnetotherapy? What effect does magnetotherapy have?

2. List the indications of magnetic therapy in dentistry

3. Types of application of mineral water in dentistry

**Case study №5**

A 34-year-old man has been in the intensive care unit for 2 weeks with a diagnosis of сlosed-head injury. Severe brain contusion on the right. Sopor. Fracture of the branch of the lower jaw. Condition after reposition of fragments. Fracture of the left humerus. Pressure ulcer in the region of the sacrum.

**Tasks**

1. Choose a physical factor to accelerate the regeneration process after fractures

2. What is the best factor to influence the pressure ulcer?

3. Is massage indicated in this condition?

**Topic 5: Medical rehabilitation in intensive care**

**Case study №1.**

The doctor has been called to the ward to see patient N., 42-years-old, who has been treated for myocardial infarction for 2 days. According to the patient, after getting out of bed, there was a strong suffocation, because of which he could not even speak. From the anamnesis it is known that he suffers from coronary artery disease for a year, he was treated permanently for angina pectoris. Smokes, abuses alcohol.

Objectively: the patient is standing near the bed, frightened. Pink, frothy sputum comes out of the mouth and nose. Acrocinosis. The respiratory rate is 38 per minute. Heart sounds are muffled. Pulse is 84 per minute, weak filling and tension. BP is 105/70 mm Hg. In the lungs in the lower lateral sections, moist rales are heard. There is no edema.

1) What kind of emergency is described?

2) Assess the severity of the patient's condition.

3) Make an algorithm for the doctor's actions when providing assistance before the arrival of the resuscitation team.

4) When is it possible to start rehabilitation activities?

**Case study № 2.**

A 64-year-old patient is admitted to the clinic with complaints of pressing pain behind the sternum, weakness. From the anamnesis: suffers from hypertension for 16 years, coronary heart disease, angina pectoris for 5 years. Deterioration of well-being is associated with physical stress.

Physical examination: the patient's condition is severe; the skin is pale, covered with cold sweat; the patient is lethargic. In the lungs there is vesicular breathing, no wheezing. The pulse is thready. Heart sounds are weakened, the rhythm is correct. Heart rate is 92 per 1 minute. BP - 80/60 mm Hg. The abdomen is soft and painless. The liver is palpated along the edge of the costal arch. ECG: sinus rhythm, abnormal Q wave in I, II standard leads, aVL, ST segment depression and negative T wave in leads I, II, aVL, V1-V4.

1) Formulate a preliminary diagnosis.

2) What is the likely cause of the deterioration?

3) Make an algorithm for the doctor's actions when providing assistance before the arrival of the resuscitation team.

4) When is it possible to start rehabilitation activities?

**Case study №3**

A 47-year-old patient is admitted to the intensive care unit with complaints of compressive pain in the lower third of the sternum, lasting more than 1.5 hours, attacks of loss of consciousness. From the anamnesis: coronary heart disease, angina pectoris for 2 years; deterioration of health is observed during the last month, when attacks of compressive pain behind the sternum has intensified, disturbing when going up to the 2nd floor. The patient took Nitrosorbide 0.02 twice a day. In the morning there were compressive pains in the lower third of the sternum, accompanied by bouts of loss of consciousness, Nitroglycerin was taken repeatedly, without effect, was taken to the clinic by the ambulance doctor.

Physical examination: severe condition, bouts of loss of consciousness. In the lungs, vesicular breathing, no wheezing. Heart sounds are muffled, heart rate is 40 per 1 min. BP - 140/90 mm Hg. The abdomen is soft and painless. The liver is determined along the edge of the costal arch. On the ECG: heart rate 40 per 1 minute. QS complex in II, III standard leads, aVF.

1). Formulate a preliminary diagnosis.

2). What is the likely cause of the worsening of the condition?

3). Make a program of examination of the patient.

4) Make an algorithm for the doctor's actions when providing assistance before the arrival of the resuscitation team.

5) When is it possible to start rehabilitation measures?

**Topic 6: Medical rehabilitation of cardiovascular diseases**

**Case study №1.**

A 45-year-old patient P. has a diagnosis of myocardial infarction, severity class III, day 14.

**Tasks**

1. Define the main tasks for this period of the disease course

2. What are the indications for the transfer from the 2nd to the 3rd stage of activity in patients with MI?

3. Set up a physical rehabilitation program

4. List leisure activities

5. List household workload for the patient

**Case study №2**

A 49-year-old man has been observed for 2 years with a diagnosis of Stage II Hypertension. He turned to the therapist for an appointment with complaints of frequent headaches in the occipital and temporal region, dizziness and flies before the eyes, and an increase in blood pressure to 160/90 mm Hg.

**Tasks**

1. What physical factor would you recommend for the patient?
2. Specify the number of procedures.
3. Choose forms of physical therapy for the patient to exercise on his own
4. What effect does electrosleep have on the nervous system?
5. What types of resorts are recommended in this case?

**Case study №3**

 A 56-year-old man suffered from acute small-focal MI 3 years ago. On a ticket, he arrives at a resort on the Black Sea coast. After the trip, he complains of pain in the cervical region.

**Tasks**

1.  The goal of physical therapy at the initial stage

2. Pick up a factor

3. Is it compatible with other factors?

4. List common contraindications for physiotherapy

5. Pick up the forms of exercise therapy at the sanatorium-resort treatment

**Case study №4**

A 57-year-old man suffered a transmural myocardial infarction a month ago. At the moment, he continuously entered the sanatorium stage from the hospital. For 2 days in the sanatorium, he has a runny nose, sneezes, T 36.8.

**Tasks**

1. Determine the sanatorium-resort regime

2. Choose a physical factor to eliminate catarrhal phenomena

3. Write out the exercise plan

4. What effect does electrosleep have on the nervous system?

5. What forms of physical therapy are shown at the stationary stage?

**Case study №5**

 A 34-year-old woman has been troubled by hypotonic conditions since her youth, drinks strong coffee in the morning, and is asthenic. She goes to see a general practitioner complaining of a headache in the temporal areas; she often wakes up with a headache, blood pressure is down to 90/60 mm Hg

**Tasks**

1. List the tasks of physical therapy for arterial hypotension

2. List the tasks of massage for arterial hypotension

3. What forms of physical therapy can be chosen to use at home?

4. Who should diagnose the breathing pattern at the outpatient stage?

5. During the massage, which zones are mainly affected by manual action in case of arterial hypotension?

**Topic** 7: Medical rehabilitation of pulmonology diseases

**Case study№1**

A 33-year-old patient is in the pulmonology department with a diagnosis of community-acquired pneumonia of the lower lobe of the right lung. Complaints: a sharp rise in temperature, weakness, cough, shortness of breath, pain in the right half of the chest, and rusty sputum. Fell ill after hypothermia. At home, he took antipyretic drugs, but his condition quickly worsened. Objectively: the patient's condition is severe, the temperature is 39.5°C. Respiratory rate is 32 per min. The right half of the chest lags behind in the act of breathing, vocal fremitus in the lower parts of the right lung is increased, with percussion dullness is found, with auscultation: crepitus wheezing. Pulse 110 per min, rhythmic. BP is 100/65 mm Hg, heart sounds are muffled.

**Tasks**

1. Is rehabilitation with the help of physical factors indicated in this case?

2. With what drugs is electrophoresis used in pneumonia?

3. What is the difference between UHF therapy and microwave therapy?

4. Tell about the sanatorium-resort treatment for pneumonia, what is it used for? What physical therapy procedures can be performed?

**Case study№ 2**

A 33-years-old woman complaints of congestion in the nose, periodic headache, and fatigue. She got sick a month ago. She suffered from ARVI, which was complicated by exacerbation of sinusitis. She underwent a course of antibiotic therapy. The condition has improved. ESR 10 mm per hour. Discharged for work.

**Tasks**

1.  What effect does the use of ultrasound have in this condition?

2. Determine the stage of medical rehabilitation

3. Make recommendations for the patient at the end of the stage.

**Case study№3**

A patient has community-acquired focal pneumonia of the lower lobe of the right lung (day 3). Complaints: cough with sputum and subfebrile temperature. X-ray revealed infiltration of the affected lobe.

Question 1: What is the purpose of physical therapy;

Question 2: General contraindications;

Question 3: Implementation methodology;

Question 4: Compatibility with other physical factors;

Question 5: Specify the time interval between courses;

**Case study№4**

A 41-years-old man has been suffering from bronchial asthma for 26 years. Exacerbations are once in 2-3 years. Last exacerbation was 3 years ago. Over the past year, during stress, he notes 2 exacerbations per year, for which he underwent inpatient treatment. Started using a hormonal inhaler.

**Tasks**

1.Will sound gymnastics be effective in this condition?

2. List the forms of physical therapy at the sanatorium-resort stage.

 3. Is it necessary to restore the breathing pattern in this pathology?

**Case study№5**

A 24-years-old woman is discharged from the hospital with a diagnosis of acute bronchitis. Since childhood she has been suffering from bronchial asthma. Over the past year, there has been an increase in asthma attacks.

**Tasks**

1. Determine the stage of medical rehabilitation.

2. What massage techniques will be more effective in this case?

 3. What effect does exercise therapy have on the respiratory system in this diagnosis?

**Topic 8: Medical rehabilitation in orthopedics and traumatology**

**Case study 1**

A 48-years-old man underwent surgery for reposition of fragments of the lower jaw three days ago.

**Tasks:**

1. Is physical therapy indicated?

2. Is it advisable to use sound gymnastics?

3. What means of physical therapy are used in the rehabilitation center?

4. What is the name of gymnastics for the face area?

**Case study 2**

A patient with an ankle joint injury was prescribed active exercises of a dynamic nature, and the use of special sliding planes was recommended.

**Tasks**

Question 1: Can physical exercises using special sliding planes be called active dynamic exercises?;

Question 2: What is the difference between dynamic and static exercises?;

Question 3: What is the difference between passive and active physical exercises?;

Question 4: What exercises are called static?;

Question 5: What exercises are called passive?;

**Case study 3**

A 39-years-old man suffered a right fibula condyle fracture 2 weeks ago. Plaster cast was applied. He is in outpatient treatment. For a month he has been experiencing pain in the lumbar region.

**Tasks**

1. Is massage indicated at the moment?

2. Is physical therapy indicated at this stage?

3. Is it possible to carry out physical therapy on the affected limb immediately after removing the cast?

4. Is it advisable to use breathing exercises for this injury?

5. What means of physical therapy are recommended to be used after the removal of the cast?

**Case study 4**

A 47-years-old woman was in a car accident. Delivered by an ambulance with a diagnosis of closed-head injury. Minor brain injury. Fracture of the pelvis and left radius, 8th and 9th ribs on the right. He has been in the traumatology department for 2 weeks on bed rest.

**Tasks**

1. Choose physical therapy procedures that help accelerate bone tissue regeneration.

2. Is massage indicated at the moment?

3. Is physical therapy indicated at this stage?

4. Are ideomotor exercises indicated?

5. What massage techniques are indicated?

**Case study № 5**

A 61-years-old woman underwent hip replacement surgery 2 days ago. Condition is stable.

**Tasks**

1. Determine the medical rehabilitation (MR) stage.

2. Determine the motor regime.

3. When is it advisable to start massage?

4. Make an MR program for the outpatient stage.

5. At what stage of the MR is the task of forming the correct gait pattern set?

**Topic 9: Medical rehabilitation in surgery and oncology**

**Case study 1**

 A 34-years-old man has been suffering from pain in the epigastric region for 6 years, provoked by stress, eating disorders, fatty foods, night meals. He underwent inpatient treatment with a diagnosis of gastric ulcer (ulcer along the lesser curvature), the scarring phase, the remission stage.

**Tasks**

1. Which specialists should be involved in the patient's rehabilitation?

2. Prescribe a diet (a “table”) for the acute period

3. Describe features of the mineral water use in case of increased acidity

**Case study 2**

A 43-year-old woman at an oncologist's appointment complains of swelling, pain, limited mobility in the right upper limb. From the anamnesis: 3 months ago mastectomy of the right mammary gland

**Tasks**

Question 1: What is the rehabilitation prognosis in this case?

Question 2: Is the goal of rehabilitation consistent with the group's prognosis?

Question 3: Methods of rehabilitation;

Question 4: What physiotherapeutic factor is indicated for pain in the shoulder joint?

Question 5: What means of medical rehabilitation is used for lymphostasis of the upper limb?

**Case study №3**

A 62-year-old patient is hospitalized for perforated gastric ulcer, 4 days after surgery: Resection of 1/3 of the stomach. Complaints: soreness in the field of postoperative suture, disorder of intestinal motility.

**Tasks.**

Question 1: Name the stage, the period of rehabilitation;

Question 2: List the motor regimes in the hospital;

Question 3: Tasks of physical therapy at this stage;

Question 4: What are the means of medical rehabilitation are used in this case?;

Question 5: Contraindications to physical therapy at this stage;

**Case study №4.**

A 35-year-old woman the next day after an appendectomy complaines of increased pain in the area of the postoperative wound, a feeling of warmth, a feeling of fullness of the wound. On examination: the condition is satisfactory, the skin and visible mucous membranes are pink. Body temperature 37.4°C, BP 110/80 mm Hg, PS 78 bpm. The abdomen is evenly swollen, peristalsis is auscultated. The bandage on the wound is slightly soaked with blood, the suture is tense, painful on palpation; when pressing, blood clots come from the suture,

**Tasks.**

Question 1: Determine the diagnosis;

Question 2: What are the causes of hematoma?;

Question 3: Prevention of hematomas;

Question 4: Conservative treatment of hematomas;

Question 5: List the physical therapy factors used in the treatment of hematomas;

**Case study №5.**

A 53-year-old patient was operated on 2 months ago for left breast cancer, the operation was a radical mastectomy. 2 weeks after the surgical intervention, the patient went to the hospital with complaints of increasing swelling of the left upper limb, where the woman was diagnosed with lymphedema on the left

**Tasks.**

Question 1: What are the main goals of medical rehabilitation in the treatment of cancer patients?

Question 2: Name the main stages of medical rehabilitation of cancer patients;

Question 3: What rehabilitation measures should be prescribed in the treatment of this complication?

Question 4: What is the purpose of prescribing exercise therapy in the postoperative period?

Question 5: What is the prognosis for the disease development?

**Topic 10: Medical rehabilitation of neurological diseases**

**Case study 1**

A 56-year-old patient was diagnosed with the consequences of a hemorrhagic stroke in the form of spastic left-sided hemiparesis and prescribed a course of physical therapy. Exercises are performed at the same pace for 25-30 minutes in a standing position. At the end of the session, the patient uses gymnastic equipment.

**Tasks**

Question 1: Tasks of physical therapy;

Question 2: Indications for physical therapy prescription;

Question 3: Physical therapy technique in the acute period;

Question 4: Compatibility with other treatments;

Question 5: Is the session structured correctly for this patient? Why?;

**Case study 2**

A 58-year-old patient Y. was diagnosed with the consequences of hemorrhagic stroke in the form of spastic right-sided hemiparesis, a course of physical therapy was prescribed.

**Tasks**

Question 1: What influences the amount of physical activity;

Question 2: Describe the treatment by "position" for the hand;

Question 3: For how long is treatment by “position” prescribed?

Question 4: In which case do gymnastics start from the proximal part of the limbs, and in which case from the distal part of the limbs?

Question 5: What test is used to evaluate the effectiveness of rehabilitation measures for the upper limb?

**Case study 3**

A patient has manifestations of osteochondrosis of the cervical spine. Complaints: pain in the cervical spine when turning the head. The purpose of physical therapy is the appointment of a physical therapy technique and prescription.

**Tasks**

Question 1: Purpose of physical therapy;

Question 2: General contraindications.;

Question 3: Implementation methodology;

Question 4: Compatibility with other physical factors;

Question 5: Indicate the age limits for the use of the factor;

**Case study 4**

A 68-year-old man has been suffering from hypertension for 15 years. After stress he lost consciousness, fell. When examined in a hospital after 40 minutes, it was revealed: coma I, purple face, pulse 56 beats per minute, blood pressure 220/120 mm Hg, breathing is hoarse, the left cheek droops when breathing, there are no active movements in the left limbs, there is Babinski sign on the left.

**Tasks**

Question 1: Make a presumptive clinical diagnosis;

Question 2: What examinations should be carried out in the hospital?

Question 3: What treatment tactics can be recommended?

Question 4: What are the main rehabilitation measures? Prevention of disability;

Question 5: Possible complications and outcomes of the disease;

**Case study 5**

During the exercise on the rings, a 20-year-old man was injured in the lumbar spine. He was taken to the Regional Clinical Hospital to the neurosurgical department with a diagnosis of: closed spinal cord injury of the lumbosacral region: contusion of the cauda equina of the spinal cord with severe pain radicular syndrome, flaccid paralysis of the lower extremities with urinary retention disorder, symmetrical anesthesia on the lower extremities and perineum, acute period

Tasks

Question 1: On what principles will the rehabilitation process be built?

Question 2: What specialists can be included in the multidisciplinary team?

Question 3: Who should draw up the medical rehabilitation program?

Question 4: What should be reflected in the rehabilitation program?

Question 5: What activities should be organized by the social service?

**Topic 11: Medical rehabilitation in pediatrics**

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|  |
| --- |
| A 17-year-old boy seeks medical help |

### Complaints

### An increase in temperature up to 37.5 ° C, pain in the knee and left ankle joints.

### Medical history

|  |
| --- |
| Two months ago he suffered urethritis. Joint pain and fever for two weeks |

### Anamnesis of life

|  |
| --- |
| He was born as the 1st child in the family, on time. Vaccinated according to the calendar. Of the transferred diseases - chicken pox, otitis media, obstructive bronchitis. At the age of 14, he was observed by a urologist for urethritis of chlamydial etiology. |

### Physical examination

|  |
| --- |
| On admission he was in a state of moderate severity. The gait is disturbed, the patient limps. Pronounced swelling of the right knee joint in the area of the upper inversion, left ankle joints mainly in the area of the Achilles tendon, ballotation of the patella. An objective examination shows a restriction (Thomayer test 30 cm) and sharp pain when bending forward in the lumbosacral region. Moderately pronounced scleritis is noteworthy. The skin is clean, moderate moisture. Respiration is vesicular, 16 per minute. Heart sounds are clear, rhythmic, 74 per minute. The abdomen is painless, the liver and spleen are not enlarged. Defecation: normal stool. Notes discomfort during urination. A laboratory study at the place of residence revealed leukocytosis 12\*109 /l, ESR acceleration up to 28 mm/h, CRP - 4 mmol/l, Gamma-globulinemia - 27%. |

# Tasks

1. What are the laboratory methods of examination necessary for making a diagnosis?

2. Highlight the features of arthritis that characterize the suspected disease

3. What should differential diagnosis exclude?

4. Given the complaints, history and clinical picture, what the patient can be diagnosed with?

5. Describe treatment of the underlying disease.

6. What rehabilitation methods can be used?

7. Determine the terms of admission to physical therapy exercises.