FEDERAL STATE BUDGET EDUCATIONAL INSTITUTION OF HIGHER EDUCATION
"ROSTOV STATE MEDICAL UNIVERSITY" OF THE MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION

FACULTY OF TREATMENT AND PREVENTION

Appraisal Fund
in the discipline "Hospital Therapy"

Specialty 05/31/01 General Medicine

2023

1. List of competencies formed by the discipline (in full orpartially)

professional (PC)

Code and name of professionalcompetencies	Indicator(s) of professional achievementcompetencies
PK-8	abilityto determine tactics for managing patients with various nosological forms
PK-10	readiness to provide medical care for sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care

2. Types of assessment materials in accordance with the competencies being developed

Namecompeten cies	Types of assessment materials	number of tasks **for 1 competency**
PC-8	Closed tasks	25 with sample answers
	Open type tasks: Situational tasks Interview questions Tasks for additions (no more than 10)	75 with sample answers
PC-10	Closed tasks	25 with sample answers
	Open type tasks: Situational tasks Interview questions Addition tasks (no more than 10)	75 with sample answers

PC-8:

Closed type tasks:

Task 1. Instructions: Choose one correct answer. Clinically, the second period of acute lung abscess is determined by:

A) after the formation of a cavity with a pyogenic membrane;
B) after the breakthrough of pus or ichorous detritus through the bronchus;
C) after the breakthrough of pus or ichorous detritus into the pleural cavity;
D) until pus or ichorous detritus breaks through into the pleural cavity;
E) until pus or ichorous detritus breaks through the bronchus.

Sample answer: B) after the breakthrough of pus or ichorous detritus through the bronchus.

Task 2. Instructions: Choose one correct answer. Frenicus - a symptom occurs when the focus of destruction is localized:

A) in the area of the apex of the lung;
B) in the area of tracheal bifurcation;
C) subpleural;
D) in the basal segments of the lung.

Sample answer: D) in the basal segments of the lung.

Task 3. Instructions: Choose one correct answer.

The most likely diagnosis when cloud-like foci of a heterogeneous structure with unclear contours in combination with a non-structural root is detected on an x-ray of the lungs:

A) pulmonary tuberculosis;
B) pneumonia;
C) lung cancer;
D) "eosinophilic pneumonia";
E) pulmonary infarction.
Sample answer: B) pneumonia.

Task 4. Instructions: Choose one correct answer.
The main criterion for successful reperfusion after systemicthrombolysis is:
A) reduction of ST segment elevation by 50% or more from the original;
B) pain relief;
C) disappearance of signs of heart failure;
D) restoration of AV conduction.
Standard answer: A) reduction in ST segment elevation by 50% or more from the original.

Task 5. Instructions: Choose one correct answer. Type 1 of acute myocardial infarction is:
A) myocardial infarction caused by an imbalance in oxygen delivery and consumption;
B) myocardial infarction, in which intracoronary thrombosis is detected during coronary angiography or atherothrombosis at autopsy;
C) cardiac death in a patient with symptoms suggestive of myocardial ischemia;
D) myocardial infarction associated with coronary angioplasty or stenting.
Sample answer: B) myocardial infarction, in which intracoronary thrombosis is detected during coronary angiography or atherothrombosis at autopsy.

Task 6. Instructions: Choose one correct answer.
Thrombolytic therapy is indicated for
A) acute coronary syndrome with ST elevation;
B) acute coronary syndrome without ST elevation;
C) any acute coronary syndrome;
D) unstable angina.
Sample answer: A) acute coronary syndrome with ST elevation.

Task 7. Instructions: Choose one correct answer.
Mechanical complications of myocardial infarction include all except:
A) acute left ventricular failure;
B) rupture of the mitral valve chords;
C) rupture of the interventricular septum;
D) rupture of the papillary muscles.
Sample answer: A) acute left ventricular failure.

Task 8. Instructions: Choose one correct answer.
The most important indicator for diagnosing nephrotic syndrome is:
A) Hypoalbuminemia
B) Albuminuria

C) Disipidemia
D) Arterial hypertension Standard
answer: B) Albuminuria.

Task 9. Instructions: Choose one correct answer.
The most characteristic laboratory sign of nephrotic syndrome is: Proteinuria with daily protein loss of less than 3.5 g.
Leukocyturia
Hematuria
Proteinuria with daily protein loss of more than 3.5 g.
Sample answer: D) Proteinuria with daily protein loss of more than 3.5 g.

Task 10. Instructions: Choose one correct answer. The most typical combination of nephrotic syndrome is: Edema, proteinuria, hypoalbuminemia
Fever, dysproteinemia, leukocyturia Arterial hypertension, proteinuria, leukocyturia
Arterial hypertension, edema syndrome, hematuria Standard answer: A) Edema, proteinuria, hypoalbuminemia.

Task 11. Instructions: Choose one correct answer.
In a patient with nephrotic syndrome and bronchiectasis, what should be excluded first?
Chronic pyelonephritis
Amyloidosis
Tubulo-interstitial nephritis Chronic glomerulonephritis Sample answer:
B) Amyloidosis.

Task 12. Instructions: Choose one correct answer.
In a patient with stage 5 CKD who has missed another hemodialysis session, the ECG can most likely expect:
A) high pointed T wave; B) T wave inversion;
C) ST segment depression;
D) the presence of a pathological Q wave.
Sample answer: A) high pointed T wave.

Task 13. Instructions: Choose one correct answer. The description of "Facies nephritica" corresponds to:
A) puffy, cyanotic face with swelling of the neck veins, pronounced cyanosis and swelling of the neck;
C) a deathly pale face with a grayish tint, sunken eyes, a pointed nose, with drops of cold profuse sweat on the forehead;
C) puffy, pale face with swelling under the eyes, swollen eyelids, narrow palpebral slits;
D) pronounced cyanosis of the lips, tip of the nose, chin, ears.
Sample answer: C) puffy, pale face with swelling under the eyes, swollen eyelids, narrow palpebral slits.

Task 14. Instructions: Choose one correct answer. The cause of uremic osteodystrophy in CKD is:

A) increase in urea level; B) increase
in creatinine level;
C) increase in the level of parathyroid hormone;
D) decrease in erythropoietin levels.
Sample answer: C) an increase in the level of parathyroid hormone.

Task 15. Instructions: Choose one correct answer.
Specify the cardinal clinical sign of a lung abscess breaking into the bronchus: A) sudden acute pain in the chest;
C) sudden release of copious purulent sputum mixed with blood; C) loss of consciousness, cold sweat;
D) sudden increase in body temperature;
E) drop in blood pressure, collapse.
Sample answer: B) sudden release of copious purulent sputum mixed with blood.

Task 16. Instructions: Choose one correct answer.
Characteristic signs of the transition of an abscess to gangrene:
A) more severe course with signs of intoxication;
B) the appearance of dirty-gray, foul-smelling sputum;
C) anaerobic microflora in sputum;
D) all of the above.
Sample answer: D) all of the above.

Task 17. Instructions: Choose one correct answer.
Clinical and laboratory diagnostic criteria for community-acquired pneumonia: a) cough with sputum, b) physical signs of compaction of lung tissue, moist rales, crepitus, c) hemoptysis, d) leukocytosis in a general blood test more than 10x109/l, e) severe iron deficiency anemia. Choose the correct answer:
A) a), b), d);
B) a), b), c);
C) b), d), e);
D) a), b), d).
Sample answer: A) a), b), d).

Task 18. Instructions: Choose one correct answer. Which of the following is not included in the concept of ACS?
A) stable angina;
B) myocardial infarction with ST elevation;
C) myocardial infarction without ST elevation;
D) unstable angina.
Sample answer: A) stable angina.

Task 19. Instructions: Choose one correct answer. The cause of ACS in most cases is:
A) inflammation of the coronary arteries;
B) spasm of the coronary arteries;
C) systemic vasculitis;
D) stenosing atherosclerosis.
Standard answer: D) stenosing atherosclerosis.

Task 20. Instructions: Choose one correct answer.

The progression of angina is indicated by:
A) increased frequency of attacks;
B) increased duration of attacks;
C) increasing the dose of nitroglycerin to relieve an attack;
D) all of the above.
Sample answer: D) all of the above.

Task 21. Instructions: Choose one correct answer.
What element of the electrocardiogram is of diagnostic value in acute coronary syndrome?
A) PQ interval;
B) ST segment;
C) P wave;
D) QT interval.
Sample answer: B) ST segment.

Task 22. Instructions: Choose one correct answer. A second order pacemaker is normally:
A) sinoauricular node;
B) atrioventricular node;
C) common bundle of His;
D) bundle branches;
E) Purkinje fibers.
Sample answer: B) atrioventricular node.

Task 23. Instructions: Choose one correct answer. Life-threatening arrhythmias include all except:
A) paroxysms of ventricular tachycardia;
B) ventricular extrasystole of high gradations;
C) supraventricular extrasystole;
D) ventricular flutter and fibrillation;
E) atrial fibrillation in WPW syndrome. Sample answer: C) supraventricular extrasystole.

Task 24. Instructions: Choose one correct answer. First degree atrioventricular block is characterized by:
A) periodic loss of the QRS complex;
B) prolongation of the PQ interval more than 0.20 s;
C) prolongation of the PQ interval more than 0.15 s;
D) prolongation of the PQ interval by more than 0.20 s and periodic loss of the complex QRS;
E) prolongation of the PQ interval by more than 0.25 s.
Sample answer: B) prolongation of the PQ interval by more than 0.20 s.

Task 25. Instructions: Choose one correct answer.
The effective daily dose of propafenone for the treatment of atrial fibrillation is (in mg.):
A) 200-400
B) 100-200
C) 160-320
D) 450-900
Standard answer: D) 450-900.

Open type tasks:

Exercise 1.

The main feature allowing to differentiate hospital Andcommunity-acquired pneumonia is considered_____ _____.

*Sample answer:*the nature of the occurrence of pneumonia (place and time).

Task 2.

How long after contact with an allergen do acute symptoms of "eosinophilic pneumonia" appear?

*Sample answer:*several hours after contact with the allergen.

Task 3.

What is the most informative sign of pulmonary tuberculosis?

*Sample answer:*detection of Mycobacterium tuberculosis in the sputum of a patient with focal radiological changes in the lungs.

Task 4.

List the criteria for the adequacy of antibacterial therapy for community-acquired bilateral bronchopneumonia with localization in the middle and lower lobes of the right lung, as well as the lower lobe of the left lung, severe, complicated by stage I ARF.

*Sample answer:*body temperature below 37.5°C; no intoxication; absence of respiratory failure (respiratory rate - less than 20 per minute); absence of purulent sputum; the number of leukocytes in the blood is less than 10×109/l, neutrophils - less than 80%, juvenile forms - less than 6%; absence of negative dynamics on the radiograph.

Task 5.

List the diseases that relate to disseminated processes in the lungs?

*Sample answer:*idiopathic pulmonary fibrosis, exogenous allergic alveolitis (hypersensitivity pneumonitis), sarcoidosis, focal disseminated tuberculosis, Wegener's granulomatosis.

Task 6.

What changes on a chest x-ray are characteristic of idiopathic pulmonary fibrosis?

*Referenceanswer:*An X-ray of the chest organs reveals an increase and deformation of the pulmonary pattern in the form of a "honeycomb lung", mainly on the periphery in the lower parts of the lungs.

Task 7.

Patients with suspected acute coronary syndrome without persistent elevation ST segment is recommended to be chewed and swallowed_____ mg acetylsalicylic acid acids.

*Sample answer:*150 – 325 mg.

Task 8.

List the ECG signs of atrial fibrillation.

*Sample answer:*Absence of P waves, presence of f waves and different RR distances.

Task 9.

What functional tests that activate the vagal function are allowed to relieve paroxysmal tachyarrhythmias?

*Sample answer:*abdominal straining test; rhythmic pressure on the eyeballs; rhythmic pressure on the glomus carotis on one side.

Task 10.

Describe the X-ray picture of pulmonary tuberculosis.

*Sample answer:*On an x-ray in the upper parts of the lungs, one can detect dense rounded lesions with fuzzy or clear contours and a path to the root, or a dense rounded lesion with the presence of smaller lesions near a scattering.

Task 11.

A 53-year-old patient complains of a cough with the release of a small amount of mucopurulent sputum, an increase in body temperature to 39.6°C, and general weakness. Got sick 2 days ago after hypothermia. Abuses alcohol.

An objective examination revealed a general condition of moderate severity. Moist fine bubbling rales were heard over the lower and middle parts of the right lung, and crepitus over the middle parts. An X-ray in the S6 projection revealed infiltration. The content of leukocytes in the blood is 15.4 x 1012/l, band neutrophils are 12%, ESR is 36 mm/h.

The boundaries of the heart are within normal limits. Heart sounds are rhythmic and clear. Heart rate = 96/min., A/D = 130/80 mmHg. Art. The bandage on the wound is dry. Abdominal organs without pathology. The spleen is not palpable. There is no peripheral edema. Physiological functions are not impaired.

The patient was prescribed amoxicillin 500 mg intramuscularly three times a day. On the 7th day from the onset of the disease, profuse purulent, foul-smelling sputum “full of mouth” appeared, the body temperature dropped to 37.5 ° C, the general condition improved, moist medium and coarse bubbling rales began to be heard over the lungs, “amphoric” breathing appeared over the lower lobe of the right lung .

Questions:

1) Preliminary diagnosis.
2) Additional studies to clarify the diagnosis
   Andoptimize treatment.
4) Suggest the most effective antibacterial therapy regimen in this case.

*Response standard***:**

1) abscess of the lower lobe of the right lung;
2) computed tomography of the lungs, mole culture microflora,bronchoscopy;
3) imipenem + linezolid.

Task 12.

The patient, 49 years old, complains of a cough with the release of mucopurulent sputum up to 200 ml per day, pain in the right side when breathing, increased body temperature up to 37.5˚, chills, shortness of breath.

He became acutely ill more than 3 months ago after hypothermia, the illness began with chills, an increase in body temperature, then a cough and pain in the side appeared. He was treated in the hospital and then as an outpatient for acute lung abscess, taking antibiotic therapy for 4 weeks. During treatment, the patient's condition improved, but the cough and low-grade fever persisted.

Objectively: the general condition is of moderate severity. The skin is of normal color. The nail plates look like watch glasses, and the terminal phalanges of the fingers look like

"Drumsticks". The chest is of regular shape, symmetrical, the right half of it is somewhat behind in the act of breathing. On percussion to the right behind the middle of the scapula and below, there is a moderate dullness of the percussion tone. Auscultation also reveals hard breathing, moist rales of various sizes, heart rate = 100 per minute. The boundaries of the heart are within normal limits. BP=120/70 mm Hg. Art.

In the general blood test, hemoglobin is 110 g/l, leukocytes are 12x109//l, ESR is 28 mm/h. General urine analysis without pathology. On the radiograph of the OGK, in the projection of the lower lobe on the right, there is a cavity with a horizontal fluid level against the background of pneumosclerosis.

Questions:

1. Preliminary diagnosis.
2. Additional studies to clarify the diagnosis
   Andoptimize treatment.
3. The most effective drugs for empirical etiotropic therapy.

Sample answer:

1. chronic abscess of the lower lobe of the right lung;
2. computed tomography of the lungs, mole culture microflora,bronchoscopy;
3. meropenem + linezolid.

Task 13.

Patient F., 52 years old, consulted a local physician at his place of residence with complaints of fever up to 38°C, weakness, chills, cough with small amounts of yellow sputum. He became acutely ill when 3 days ago his temperature rose to 38.2°C and noted general malaise, weakness and chills. Didn't take any medications. Yesterday I started coughing with sputum. Objectively: the patient's condition is moderate. Body temperature 37.7°C. The skin is of normal color, without rashes. There is no peripheral edema. Lymph nodes are not enlarged. The chest is of regular shape and evenly participates in the act of breathing. Breathing in the lower parts of the lungs on the right is broncho-vesicular, somewhat weakened, ringing fine rales are heard there, and upon percussion - a slight shortening of the percussion sound. Respiratory rate - 20 per minute. The boundaries of the heart are not changed. Heart sounds are rhythmic and clear. Heart rate - 100 beats per minute. Blood pressure - 110/70 mm Hg. Art. The abdomen is soft, painless on palpation. The liver and spleen are not enlarged. The effleurage symptom is negative on both sides. There is no dysuria. The stool is regular and formed. An X-ray of the OGK revealed: several heterogeneous cloud-like foci with unclear contours against the background of an enhanced pulmonary pattern in the lower lobe of the right lung, the root of the right lung is expanded and unstructured.

Questions:

1. Formulate a preliminary diagnosis and justify it.
2. Schedule an examination.
3. What diseases are differentiated first when lesions appear on X-ray.
4. What diseases with focal lung damage are differentiated in this case. 5. Prescribe treatment.

Sample answer:

1. Main diagnosis: Community-acquired bronchopneumonia in the lower lobe of the right lung, non-severe course. The diagnosis was made based on the development of the disease outside the hospital, the presence of: an acute onset, an increase in temperature to 38.2 ° C at the onset of the disease, cough with sputum, physical signs of compaction of the lung tissue, ringing fine rales in the projection of the lower lobe of the right lung, as well as P data - OGK studies that revealed changes typical of focal pneumonia (bronchopneumonia). However, there are no criteria for severe pneumonia.

2. General blood analysis; general sputum analysis; bacteriological examination of sputum; X-ray of the lungs in direct and right lateral projections in dynamics.

3.Pneumonia, tuberculosis, lung cancer, pulmonary infarction, “eosinophilic pneumonia.”

4. Bed rest, drink plenty of fluids. Broad-spectrum penicillin antibiotics (for example, Amoxicillin 500 mg 3 times a day orally). Expectorant (for example, Ambroxol hydrochloride 30 mg 3 times a day orally). Antipyretics at body temperature>38°C (for example, Paracetamol 500 mg orally no more than 1 time within 6 hours).

Task 14.

Patient T., 45 years old, changes in the lungs were identified after a preventive fluorographic examination of the chest organs. As a child, she was registered at the tuberculosis dispensary due to contact with her mother with tuberculosis. Smoking experience 25 years. He makes no complaints. The condition is relatively satisfactory, low nutrition. The skin and visible mucous membranes are pale. Auscultation reveals harsh breathing, no wheezing. There are no changes in other organs and systems. On a survey fluorogram of the respiratory organs in 1-2 segments of the right lung, against the background of an enhanced pulmonary pattern, focal shadows of low intensity with unclear contours are determined.

Questions:

1. The most likely diagnosis.
2. What research methods are needed in this case?
3. What diseases should be differentiated in this case?
4. What complications are possible for this patient?
5. Indicate the principles of treating the patient in this situation.

Sample answer:

1. Focal tuberculosis of the upper lobe of the right lung in the infiltration phase.

2. Clinical blood test, urine test, biochemical blood test; Mantoux test with 2 TE, Diaskintest test, general sputum analysis; Ziehl-Neelsen bacterioscopy, fluorescence microscopy, MBT PCR, sputum culture for MBT with drug sensitivity testing, BACTEC; X-ray and CT scan of the chest. Fiberglass bronchoscopy.

3. Pulmonary tuberculosis, pneumonia, lung cancer, pulmonary infarction, “eosinophilic pneumonia”

4. With focal tuberculosis, complications are rare. In case of inadequate treatment, the disease may progress, enter the disintegration phase, the appearance of hemoptysis, and dissemination of the process.

5. Hospitalization in an anti-tuberculosis hospital. Prescribing a gentle regime of relative rest. High protein diet. In the intensive phase of treatment, it is recommended to prescribe a chemotherapy regimen consisting of a combination of six anti-tuberculosis drugs - Isoniazid, Rifampicin, Pyrazinamide, Ethambutol, Kanamycin (Amikacin) and a drug from the fluoroquinolone group (Ofloxacin or Levofloxacin for 3 months). The continuation phase consists of a combination of three anti-tuberculosis drugs to which sensitivity is maintained for 6 months.

Task 15.

Patient A., 45 years old, engineer, complains of chills, increased body temperature up to 39°C, inspiratory shortness of breath during normal physical activity, cough with yellow sputum, pain with deep breathing and coughing on the right in the subscapular region, general weakness, fatigue and night sweats.

He became acutely ill three days ago after hypothermia, when the temperature rose and a cough appeared, then shortness of breath developed. He took antipyretic drugs with little effect. I contacted the local general practitioner at the clinic. Due to the severity of the condition and suspicion of pneumonia, he was sent to the emergency room of the hospital at his place of residence. History: Works for 15 years as an engineer at a machine-building plant. I do not smoke. I had not been seen by a doctor before. Objectively: the general condition is serious. Skin with high humidity. Cyanosis of the lips is observed. Height - 175 cm, weight - 72 kg. Waist circumference – 100 cm. No peripheral edema. Peripheral lymph nodes are not enlarged. Body temperature 39°C. The chest is of regular shape and evenly participates in the act of breathing. NPV - 24 per minute. To the right and left along the scapular line there is a dullness of percussion sound. During auscultation on the right and left in the lower parts of the lungs, weakened bronchovesicular breathing and ringing fine bubbling rales are heard. The heart rhythm is correct, the tone ratio is normal, there are no noises. Heart rate – 110 beats per minute. Blood pressure - 100/60 mm Hg. Art. On superficial palpation the abdomen is soft and painless. The liver according to Kurlov is 9×8×7 cm, upon palpation the lower edge is smooth and painless. The chair is decorated, without impurities. Urination is free and painless. Complete blood count: red blood cells
- 4.08×1012/l, hemoglobin - 120 g/l, leukocytes - 13.2×109/l, young - 2%, rods - 12%, segments - 56%, lymphocytes - 27%, monocytes - 3% , ESR - 38 mm/h. On a plain X-ray of the chest organs in direct and lateral projections: on the right in the lower and middle lobe there are several cloud-like heterogeneous foci with unclear contours up to 1.5 cm in diameter, on the left there are several of the same foci in the lower lobe, the roots of the lungs are expanded and non-structural.

Questions:

1. Formulate a preliminary diagnosis.
2. Justify your diagnosis.
3. What focal lung lesions need to be differentiated in this case?
4. Draw up and justify a plan for additional examination of the patient.
5. What tactics and therapy does the patient require upon admission? Justify your choice. Name the criteria for the adequacy of therapy.

Sample answer:

1. Diagnosis: Community-acquired bronchopneumonia with localization in the middle and lower lobes of the right lung, as well as the lower lobe of the left lung, severe course, complicated by stage I ARF.

2. The stage of onset of the disease is very clearly expressed. The disease arose acutely; in the midst of complete health, chills suddenly appeared, body temperature increased to 39°C, chest pain when coughing, headache, dry cough, and general weakness. During an objective examination: shortness of breath with a respiratory rate of 24 per minute, physical signs of compaction of the lung tissue and ringing fine rales in the projection of the middle and lower lobes of the lungs. The results of laboratory and instrumental examination methods: leukocytosis - 13.2 × 109/l, band shift to the left to juvenile forms, radiological signs corresponding to focal pneumonia with damage to the middle and lower lobes of both lungs.

3.Pneumonia, tuberculosis, lung cancer, pulmonary infarction, “eosinophilic pneumonia.”

4. The patient is recommended to undergo further examination:

- general analysisblood with determination of the level of erythrocytes, hematocrit, leukocytes, platelets, leukocyte formula - on the 2-3rd day and after the end of antibacterial therapy;
- biochemical blood test (ALT, AST, bilirubin, albumin, creatinine, urea, glucose, electrolytes, fibrinogen, CRP)

- on admission and after 1 week if there are changes or clinical deterioration;
- pulse oximetry upon admission and over time;
- study of arterial blood gases - daily until the parameters normalize;
- radiography of the chest organs - in dynamics (in the absence of effectiveness of the initial antibacterial pneumonia after 48-72 hours, after 3-4 weeks - to assess the dynamics of resolution of pneumonia);
- electrocardiography in standard leads;
- general sputum analysis and bacteriological examination of sputum to determine the causative agent of pneumonia and determine the sensitivity of the latter to antibacterial drugs;
- sputum for acid-fast microorganisms;
- bacteriological blood test;
- procalcitonin level(correlates with the severity of the patient's condition, prognosis and etiology (higher with bacterial infection));
- rapid tests to detect pneumococcal and legionella antigenuria.

4. The patient must be hospitalized. Bed rest. For ARF: oxygen therapy. In severe community-acquired pneumonia (CAP), antibiotics should be prescribed urgently. The patient has no risk factors for P. aeruginosa infection or aspiration. It is recommended to administer drugs intravenously (Ceftriaxone, Cefotaxime, Cefepime, Ceftaroline, Ertapenem or a protected penicillin inhibitor (Amoxicillin/Clavulanate 1.2 g intravenous drip 3 times a day)) in combination with intravenous macrolides (Clarithromycin, Azithromycin), for example, Azithromycin -
500 mg intravenously 1 time per day for 3 days. After 3 days, when the temperature normalizes, switch to oral administration of a drug of the same class: Amoxicillin/Clavulanate 1 g 2 times a day. An initial assessment of the effectiveness of the initial antibacterial therapy regimen should be carried out 48-72 hours after the start of treatment.

Task 16.

Patient T., 35 years old, office manager, was taken by an ambulance team to the emergency department of a city hospital due to a sudden attack of mixed shortness of breath, palpitations, stabbing pain in the precordial area, dizziness and general weakness. The anamnesis noted that 5 days before the attack of shortness of breath, the patient developed mild swelling of the right lower limb from the foot to the inguinal fold, slight cyanosis and moderate pain in the limb. Subsequently, these symptoms persisted, and I tried to treat myself using various antibiotic ointments and alcohol compresses. A real attack of shortness of breath arose for the first time at the end of a long working day against the background of complete well-being. From the life history it is known that the patient works in an office and spends most of her time in a sitting position, leads a sedentary lifestyle, smokes, and uses combined oral contraceptives. Objectively: the condition is serious. The skin and visible mucous membranes are pale, clean, visible pulsation of the neck veins. There is swelling of the right lower limb, soft and warm to the touch, spreading from the level of the foot to the upper third of the thigh with mild cyanosis, moderate pain on palpation and preserved pulsation in the arteries of the foot, popliteal and common femoral arteries. Joints without pathology. The chest is of the correct shape. Percussion above the lungs is a clear pulmonary sound. Breathing is vesicular, there is no wheezing, respiratory rate is 25 per minute. The pulse is the same on both radial arteries, weak filling, 110 per minute, blood pressure - 90/65 mm Hg. Art. Accent of II tone at the point of listening to the pulmonary valve. There is no noise. The abdomen is symmetrical, soft, painless in all parts with superficial and deep

palpation. The liver protrudes from under the costal arch by 1 cm. The effleurage symptom is negative. Body mass index more than 31 kg/m2. Low-grade fever. Laboratory and instrumental studies revealed the following data. General blood test: hemoglobin - 130 g/l, erythrocytes - 4.1×1012/l, leukocytes - 5.7×109/l, eosinophils - 1%, band neutrophils - 10%, segmented neutrophils - 50%, lymphocytes - 35%, monocytes - 4%; ESR - 24 mm/h. General urine analysis: straw-yellow, transparent, acidic pH, specific gravity - 1010, epithelium - 2-4 in the field of view, red blood cells, casts, salts are not detected. Biochemical blood test: total bilirubin - 12.8 µmol/l, creatinine - 0.093 mmol/l, glucose - 5.6 mmol/l, cholesterol - 6.2 mmol/l, potassium - 3.7 mmol/l, total protein - 75 g/l, fibrinogen – 8.2 g/l, CRP – 25 mg/l.
ECG: Sinus tachycardia. Pathological Q and negative T in lead III, deep S in lead I. Incomplete blockade of the right bundle branch. X-ray of the chest: In the upper lobes of both lungs and the middle lobe, several cone-shaped foci located subpleurally were detected. The roots of the lungs are expanded due to the vascular component.

Questions:

1. Select the syndromes, determine the leading one.
2. Formulate a diagnosis.
3. Make a plan for additional examinations.
4. Prescribe treatment.

Sample answers:

1. Respiratory failure syndrome, acute pulmonary heart syndrome, chest pain syndrome, venous insufficiency syndrome, intoxication syndrome. The leading one is acute pulmonary heart syndrome.

2. Acute thrombosis of the common femoral vein on the right. Massive pulmonary embolism. Pulmonary infarction in the middle lobe and upper lobes of both lungs. Acute cor pulmonale.

3. X-ray of the chest organs. D-dimer. Troponins T and I. Echocardiography. CDS of the veins of the lower extremities and pelvis. Computed tomography of the chest organs. Coronary angiography. Pulse oximetry.

4. Carrying out systemic medicinalthrombolysis (Streptokinase 250,000 IU as a loading dose in 30 minutes, then 100,000 IU/hour for 12-24 hours, or Alteplase 100 mg IV for 2 hours), anticoagulant therapy (Unfractionated heparin - 5000-10000 IU intravenous jet, then continuous infusion of 10-15 U/kg/min – 5-7 days or low molecular weight Heparin – fraxiparin 0.1 ml per 10 kg of body weight for 10 days; Warfarin – 5 days before discontinuation of Heparin under INR control. , within 6-12 months). An alternative to the combination of parenteral anticoagulants with Warfarin are: Rivaroxaban 15 mg 2 times a day - 3 weeks, then 20 mg / day or Apixaban 10 mg 2 times a day - 7 days, then 5 mg 2 times a day. Inotropes (Dobutamine 5-20 mcg/kg/min or Dopamine 5-30 mcg/kg/min IV infusion), oxygen inhalation (6-8 liters/min), elastic compression of the lower extremities, in the subacute period of physiotherapy, administration of NSAIDs , phlebotonics. If there is a floating thrombus in the lumen of the vein, install a removable vena cava filter.

Task 17.

A 52-year-old patient complains of an increase in body temperature to 38°C, cough with scanty mucous sputum, moderate weakness, and malaise. Symptoms appeared more than 2 months ago, possibly after a cold. An X-ray revealed an infiltrate in the upper lobe of the right lung. He was treated for pulmonary tuberculosis; a total of 7 drugs were used. However, the patient's condition did not change significantly.

On the X-ray of the chest, the infiltrate in the upper lobe of the right lung is no longer visible, but new focal shadows have appeared against the background of an enhanced pulmonary pattern on both sides, and migration of focal shadows is observed in dynamics. The roots of the lungs are slightly enlarged on both sides. A council of phthisiatricians rejected the diagnosis of pulmonary tuberculosis.

From his life history: he previously considered himself a healthy person, occasionally suffered from acute respiratory viral infections, did not note allergies or drug intolerance, had no blood transfusions or blood substitutes, did not work in hazardous industries, did not travel outside the region in the last 3 years, did not have contact with infectious patients was, there were no helminthic infestations according to the patient.

Objectively: General condition is relatively satisfactory. Body temperature 37.2°C. The skin is of normal color, without rashes. There is no peripheral edema. Lymph nodes are not enlarged. The chest is of regular shape and evenly participates in the act of breathing. Breathing in the lower parts of the lungs on the right is broncho-vesicular, somewhat weakened, ringing fine rales are heard there, and upon percussion - a slight shortening of the percussion sound. Respiratory rate - 18 per minute. The boundaries of the heart are not changed. Heart sounds are rhythmic and clear. Heart rate - 86 beats per minute. Blood pressure - 120/70 mm Hg. Art. The abdomen is soft, painless on palpation. The liver and spleen are not enlarged. The effleurage symptom is negative on both sides. There is no dysuria. The stool is regular and formed. Laboratory and instrumental studies revealed the following data. General blood test: hemoglobin - 145 g/l, erythrocytes - 4.7 × 1012/l, leukocytes - 10.6 × 109/l, eosinophils - 36%, band neutrophils - 1%, segmented neutrophils - 39%, lymphocytes - 20%, monocytes - 4%; ESR - 25 mm/h. General urine analysis: straw-yellow, transparent, acidic pH, specific gravity - 1018, epithelium - 2-4 in the field of view, red blood cells, casts, salts are not detected. Biochemical blood test: total bilirubin - 12.8 μmol/l, creatinine - 0.093 mmol/l, glucose - 5.5 mmol/l, cholesterol - 5.2 mmol/l, potassium - 4.2 mmol/l, total protein
- 75 g/l, fibrinogen – 5.2 g/l, CRP – 7 mg/l. The sputum is mucous, a large number of eosinophils in the field of view. ECG: sinus rhythm, heart rate 84 beats/minute, no pathology detected.

Questions:

1.Formulate a diagnosis. 2.

Justify the diagnosis.

3.What pathological processes are complicated by such lung damage. 4.

Schedule a further examination to clarify the diagnosis.

5.Describe treatment measures.

Sample answer:

1. Chronic "eosinophilic pneumonia".
2. The diagnosis was made based on the presence of migrating lesions in the patient's lungs, hypereosinophilia in the blood, detection of a large number of eosinophils in the sputum, and the course lasted for more than 2 months.
3. Helminthic infestation, reaction to drugs, atopic sensitization to fungal spores, malignant tumors, diffuse connective tissue diseases and systemic vasculitis.
4. Parasitological examination. Spiral computed tomography of the lungs. Spirometry. Pulse oximetry. Ultrasound of the abdominal cavity and retroperitoneal space. MRI of the abdominal cavity and retroperitoneal space. Bronchoscopy, FEGDS, colonoscopy. Allergist consultation. Consultation with a hematologist.
5. Cancel anti-tuberculosis therapy. Prescribe glucocorticoids: prednisolone 40 mg/day orally in the morning at the beginning of treatment with gradual withdrawal over 3 months after the disappearance of symptoms and normalization of the x-ray picture. When the cause of “eosinophilic pneumonia” is identified, treatment of this pathology is carried out.

Task 18.

The patient complains of progressive shortness of breath with difficulty in inhaling, a dry cough and aching pain at the angles of the shoulder blades, aggravated by deep breathing, general weakness, fatigue, and low-grade fever. An objective examination and auscultation revealed crepitating rales of the "cellophane crackling" type up to the level of the lower third of the shoulder blades. On the radiograph of the chest, there is a widespread, enhanced pulmonary pattern due to the interstitial component in the form of unclear contours of blood vessels, peribronchial-perivascular changes and fine cellularity. Spirometry: vital capacity of the lungs - 67% of the proper value, forced expiratory volume in one second - 80% of the proper value, Tiffno test - 75%.

Questions:

1. Formulate the most likely diagnosis.
2. Indicate the main drugs for treating the disease.
3. Explain the mechanism of action and justify their purpose.

Sample answer:

1.Diagnosis: Idiopathic pulmonary fibrosis.

2. Drug therapy for idiopathic fibrosing alveolitis consists of prescribing to patients drugs with proven effectiveness, which include drugs with antifibrotic activity: nintedanib and pirfenidone. These drugs can stop the progression of the disease and possibly prolong the patient's life. Nintedanib (150 mg 1 tablet 2 times a day) is an intracellular inhibitor of tyrosine kinases acting on growth factor receptors of vascular endothelium, fibroblasts and platelets, which play an important role in the pathogenesis of idiopathic pulmonary fibrosis. Blockade of these receptors leads to the suppression of several profibrotic signaling cascades, including proliferation, migration and differentiation of fibroblasts, as well as the secretion of extracellular matrix components.

Task 19.

Patient B., 50 years old, complains of a "painful" unproductive cough during the day and a productive cough, with the release of up to 0.8-1.0 liters of mucous glassy sputum at night, as well as shortness of breath with little physical exertion, general weakness and malaise.

The disease began several months ago for no apparent reason. At first he noted a significant decrease in tolerance to physical activity, then an unproductive cough and low-grade fever appeared. The condition gradually worsened, shortness of breath progressed, and the cough intensified. In the last few days, glassy mucous sputum began to be released in large quantities at night. Antibiotic treatment had no effect. Denies bad habits and professional hazards. Lead a healthy lifestyle.

Objectively: the general condition is of moderate severity. The skin is moderately diffusely cyanotic and clean. There is no peripheral edema. Lymph nodes accessible to palpation are not enlarged and painless. The musculoskeletal system is without pathology. The chest is of regular shape and symmetrically participates in the act of breathing. The percussion tone in the lower parts on both sides is moderately shortened. Breathing is moderately weakened, crepitating rales are detected in the lower sections. NPV - 24 per minute, SatO2-92%. The boundaries of cardiac dullness are within normal limits. Heart sounds are rhythmic, moderately muffled. Heart rate - 92 per minute. Blood pressure - 130/80 mm Hg. The abdomen is soft and painless. The liver is at the edge of the costal arch, elastic, painless. The spleen is not palpable. The kidneys are not palpable, the effleurage symptom is negative on both sides. Physiological functions are not impaired.

Complete blood count: no pathologicalchanges. General urine analysis is within normal limits. Sputum analysis: mucous sputum, single leukocytes were detected,

Mycobacterium tuberculosis was not detected. Bronchoscopy showed moderate catarrhal endobronchitis. A chest x-ray shows dissemination of a large number of medium-intensity foci with unclear contours (0.5-1.0 cm in diameter) against the background of an enhanced and deformed pulmonary pattern, mainly in the middle and lower sections.

Questions:

1. Formulate a preliminary diagnosis and justify it
2. What examination is necessary to confirm the diagnosis?
3. What are the patient management tactics? What treatment is possible in this case, is surgical treatment indicated?
4. What changes in the lungs are characteristic of idiopathic pulmonary fibrosis as opposed to other disseminated processes?

Sample answer:

1. Preliminary diagnosis: bronchioloalveolar lung cancer (BAR). The diagnosis was made based on the presence of a cough in an elderly man with the release of a large amount of mucous glassy sputum up to 1000 ml/day, the gradual development of symptoms of the disease, the presence of disseminated lung lesions on the radiograph
"mesh-focal" type with predominant damage to the middle and lower parts.
2. It is necessary to conduct additional examination: spiral computed tomography of the chest organs, bronchoscopy with examination of bronchoalveolar lavage lavage water for atypical cells, histological examination of a lung biopsy. Search for possible metastases.
3. The patient is recommended to consult an oncologist to resolve issues of further treatment of this disease. It is believed that bipolar disorder is resistant to chemotherapy treatment. Experimental chemotherapy or lung transplantation may be possible.

Task 20.

A 42-year-old patient has been experiencing fluctuating temperature (up to 37.2°C) in the evenings, cough with sputum up to 10-15 ml per day, and weakness for the last 1.5 years. I didn't go to the doctors, I tried to treat myself with home remedies without any effect. Gradually, her health and condition worsened - shortness of breath began to increase, the amount of sputum increased, and a cough streaked with blood appeared. I went to the clinic, where a chest x-ray examination revealed changes in the lungs for the first time.

Sent to an anti-tuberculosis dispensary, where, upon examination, a survey X-ray of the chest organs on the right and left along the entire surface of the lungs reveals numerous focal shadows of varying intensity and size, in places merging into large focal shadows with areas of clearing, the roots of the lungs are non-structural; in the lower parts of the lungs the pulmonary pattern is enhanced; The diaphragm domes are not changed. Mantoux test with 2TE is negative. Reaction with recombinant tuberculosis allergen (Diaskintest) - papule 8 mm.

Questions:

1. The most likely diagnosis.
2. What research methods are needed in this case?
3. What diseases should be differentially diagnosed?
4. What complications are possible for this patient?
5. Indicate the principles of treating the patient in this situation.

Sample answer:

1. Disseminated pulmonary tuberculosis in the stage of infiltration and decay.

2. Clinical blood test, urine test, biochemical blood test; general sputum analysis; luminescence microscopy, MBT PCR, sputum culture for MBT with drug sensitivity testing, BACTEC; CT scan of the chest, fibrobronchoscopy.

3. Community-acquired pneumonia; exacerbation of COPD; lungs' cancer.

4. Pulmonary hemorrhage, respiratory failure, spontaneous pneumothorax.

5. Hospitalization in an anti-tuberculosis hospital. Prescribing absolute rest in a semi-sitting position for better coughing up of mucus. High protein diet. In the intensive phase of treatment, it is recommended to prescribe a chemotherapy regimen consisting of a combination of six anti-tuberculosis drugs - Isoniazid, Rifampicin, Pyrazinamide, Ethambutol, Kanamycin (Amikacin) and a drug from the fluoroquinolone group (Ofloxacin or Levofloxacin) for 3 months. Continuation phase for 6 months with a combination of three anti-tuberculosis drugs to which sensitivity is preserved. Detoxification therapy. Pathogenetic therapy. Oxygen therapy. Hemostatic therapy.

Task 21.

Patient A., 36 years old, complains of shortness of breath with moderate physical activity, a slight cough with scanty mucous sputum, and long-lasting chest pain not related to exercise.

Symptoms arose 1 month ago for no apparent reason, increasing gradually. Sometimes he suffered from acute respiratory viral infections. Denies other diseases. Heredity is not burdened. The epidemiological anamnesis is favorable. Upon objective examination, the general condition is relatively satisfactory. The skin is of normal color and clean. Lymph nodes accessible to palpation are not enlarged, painless. The musculoskeletal system is without features. Rib cagecorrect shape, evenly participates in breathing. Percussion tone in the subscapular areas on both sides is moderately shortened, moderate crepitus is also determined here, breathing is harsh, respiratory rate is 19 per minute. Heart sounds are muffled and rhythmic. Heart rate - 82 per minute, blood pressure - 130/80 mm Hg. The abdomen is soft and painless. The liver is at the edge of the costal arch, elastic, painless, the spleen is not palpable. The kidneys are not palpable, the effleurage symptom is negative on both sides. Diuresis and stool are normal.

Complete blood count: no pathology detected. General urine analysis without pathology. General analysis of sputum: mucous character, single leukocytes, mycobacterium tuberculosis were not detected. Blood troponins are within normal limits. ECG: no pathology detected. Bronchoscopy revealed moderate catarrhal endobronchitis. On a chest x-ray: bilateral enlargement of separately lying bronchopulmonary lymph nodes, not fused into bags; the roots of the lungs have a polycyclic outline. Mainly in the middle and lower parts of the lungs on both sides, a mesh-focal deformation of the pulmonary pattern is observed.

Questions:

1. Formulate a preliminary diagnosis and justify it.

2. What examination needs to be carried out?

3. Name the main drugs for the treatment of this disease and indicate the method of their use.

Sample answer:

1) Preliminary diagnosis: pulmonary sarcoidosis stage II, active (grade I), progressive course. Respiratory failure stage I The diagnosis of pulmonary sarcoidosis was made on the basis of X-ray data characteristic of sarcoidosis.

OGK studies, discrepancy between moderate clinical signs and pronounced radiological changes.

2) Additional examination is recommended: spiral computed tomography of the chest, histological examination of biopsy samples of the lungs and intrathoracic lymph nodes, pulse oximetry, spirometry, echocardiography, ultrasound of the abdominal cavity and retroperitoneal space, general blood test, general urinalysis, calciuria, blood test for creatinine, urea nitrogen , calcium, ACE, CRP, determination of glomerular filtration, immunogobulins A, M, G in blood serum, tuberculin test.

3) The main drugs for the treatment of this disease are glucocorticoids. Treatment with prednisolone (or an equivalent dose of another glucocorticosteroid) is prescribed daily in the morning per os at an initial dose of 25-30 mg per day for 4 weeks, then the dose is reduced by 5 mg per month in steps to a maintenance dose of 10 mg to control symptoms and progression of the disease and continues 12-24 months. After 3 months from the start of treatment, it is necessary to evaluate the effect of the glucocorticoid.

Task 22.

Patient M., 35 years old, became acutely ill when his body temperature rose to 37.5 °C. Complains of sweating, cough with serous sputum, weakness, malaise, weight loss of 4 kg.

Contact with tuberculosis patients was in places of detention. Released 3 months ago.

Upon objective examination, the general condition is relatively satisfactory. The skin is of normal color and clean. Lymph nodes accessible to palpation are not enlarged, painless. The musculoskeletal system is without features. The chest is of regular shape and evenly participates in the act of breathing. Percussion of the lungs revealed a slight dullness of pulmonary sound in the upper parts. When auscultating the lungs in the upper sections, breathing is harsh, in the lower sections it is weakened and vesicular. NPV - 19 per minute. Heart sounds are muffled and rhythmic. Heart rate - 82 per minute, blood pressure - 130/80 mm Hg. Body weight 70 kg. The abdomen is soft and painless. The liver is at the edge of the costal arch, elastic, painless, the spleen is not palpable. The kidneys are not palpable, the effleurage symptom is negative on both sides. Diuresis and stool are normal.

Microscopically in the sputum - acid-fast mycobacteria +++. Results of a chest x-ray: in all pulmonary fields, focal shadows measuring 5-7 mm in diameter with blurred contours are determined; in the upper sections, the lesions tend to merge and disintegrate.

Questions:

1. Formulate a preliminary diagnosis.
2. Justify your diagnosis.
3. What treatment should be prescribed in this case?
4. What diseases should be differentially diagnosed?

Sample answer:

1. Preliminary diagnosis: Disseminated pulmonary tuberculosis in the phase of infiltration and decay, Mycobacterium tuberculosis +.

2. The diagnosis was made on the basis of characteristic clinical data: weakness, sweating, increased body temperature to 37.5 ° C, decreased body weight by 4 kg, cough; objective examination: during auscultation of the lungs: in the upper parts the breathing is hard, in the lower parts it is weakened vesicular; with percussion of the lungs: slight dullness of pulmonary sound in the upper sections. Had contact with tuberculosis patients in places of imprisonment. Released 3 months ago. X-ray shows focal dissemination syndrome in the upper and middle parts of both lungs. The foci merge between

itself, there are signs of decay. Microscopically, acid-fast Mycobacterium tuberculosis was found.

3. The patient is assigned a free motor mode, table 11. Due to the patient's stay in prison, it can be assumed that he has multiple drug resistance of mycobacterium tuberculosis. Until the results of the resistance of Mycobacterium tuberculosis are obtained, a combination of six drugs is prescribed: four first-line drugs (Isoniazid 600 mg per day, Rifampicin 600 mg per day, Pyrazinamide 2500 mg per day, Ethambutol 2000 mg per day), as well as one drug from the aminoglycoside group (Kanamycin 1000 mg per day) and fluoroquinolones (Levofloxacin 1000 mg per day). The regimen is then adjusted according to the resistance of Mycobacterium tuberculosis. The duration of drug therapy can vary from 6 to 24 months depending on the presence of multidrug resistance of Mycobacterium tuberculosis.

4. Sarcoidosis, fungal infections of the lungs, pneumoconiosis, exogenous allergic alveolitis, idiopathic fibrosing alveolitis.

Task 23.

Man M., 57 years old, called a doctor to his home. Complains of intense pressing retrosternal pain radiating to the left arm and left shoulder blade. The above symptoms appeared about 2 hours ago after intense physical activity. I took 2 tablets of nitroglycerin on my own - no effect. I had never had pain of this nature before.

History of arterial hypertension for the last 10 years with maximum blood pressure values of 200/100 mm Hg. I did not take medications regularly. Smokes 1 pack of cigarettes a day for 30 years. Gas-electric welder. Denies allergic reactions.

Upon objective examination: the skin is moist. In the lungs, the percussion sound is pulmonary, vesicular breathing, no wheezing. Heart sounds are weakened, the rhythm is correct, blood pressure is 160/100 mm Hg. Art., heart rate – 88 per minute. The abdomen is soft and painless. Physiological functions are normal.

The ECG recorded: sinus rhythm, ST segment elevation > 0.2 mV in leads II, III, aVF. Transport accessibility to an emergency cardiology hospital with the ability to conduct primary PCI is 30 minutes.

Questions:

1. Formulate a preliminary diagnosis.

2. Justify your diagnosis.

3. What should be the patient management tactics at the prehospital stage? Justify your choice.

4. What amount of drug care should be provided to the patient at the prehospital stage?

5. Is there enough data to make a diagnosis of myocardial infarction? Justify your answer. If necessary, suggest additional research methods.

Sample answer:

1. Diagnosis: Acute coronary syndrome with ST segment elevation in the inferior wall of the left ventricle. Stage III hypertension, uncontrolled grade III hypertension, risk 4 (very high). OSSN according to Killip I.

2. The diagnosis of "ACS" was made based on the patient's complaints of typical anginal pain, lasting about 2 hours, not relieved by taking Nitroglycerin; characteristic ECG changes: ST segment elevation > 2 mm in more than two adjacent leads for a man over 40 years old. The diagnosis of “Hypertension” was established based on medical history (increased blood pressure in the last 10 years), the stage of hypertension was established based on the presence of ACS, indicating heart disease as

associated clinical condition. The determination of the degree of hypertension is based on the increase in blood pressure in the anamnesis and during an objective examination. The risk of cardiovascular complications is determined according to the degree of blood pressure elevation and the presence of an associated clinical condition. The diagnosis of OSHF according to Killip I is based on the absence of signs of heart failure.

3. The patient requires emergency hospitalization. It is necessary to call an emergency medical team - an intensive care team. Considering that transport accessibility to an emergency cardiology hospital is less than 120 minutes from the moment of first medical contact, the most appropriate tactic is to perform primary PCI.

4. At the prehospital stage (at the clinic stage, at home): again - Nitroglycerin, Aspirin 500 mg, chew. At the stage of emergency medical care: pain relief - Nitroglycerin IV, if ineffective - Morphine IV in fractions.

Antithrombotic therapy: Chew Aspirin 250 mg, loading dose of Clopidogrel - 300 mg orally, direct anticoagulants IV bolus - Heparin. Oxygen therapy.

5. There is not enough data. The “gold standard” for diagnosing myocardial infarction is the detection of cardiac-specific enzymes in the blood. The diagnosis can be established at the hospital stage when the most specific markers of myocardial necrosis are detected in the blood - CPK-MB, cardiac troponins.

Task 24.

Patient X., 44 years old, was admitted to the cardiology department with complaints of prolonged intense chest pain. The use of nitroglycerin did not affect the intensity of pain.

He became acutely ill after physical exertion. Attacks of pain lasting 15-30 minutes recurred periodically. Works as a diesel locomotive driver. The patient's father died suddenly at the age of 56 from a stroke.

Objectively: the general condition is of moderate severity. Pulse 92/min, rhythmic. The first heart sound above the apex is weakened. Blood pressure – 140/70 mm Hg. Art. Examination of the lungs and abdominal organs revealed no changes. There is no swelling in the legs.

Data from additional examination methods.

Complete blood count: erythrocytes - 4.1 1012/l, leukocytes - 6.1 109/l, eosinophils - 3%, band neutrophils - 5%, segmented neutrophils - 67%, lymphocytes - 20
%, monocytes - 5%, ESR - 10 mm/h.

Biochemical blood test: sugar - 5.4 mmol/l, bilirubin - 16.9 µmol/l, potassium
- 4.5 mmol/l, sodium - 134 mmol/l, ASAT - 1.35 µmol/l, ALAT - 0.92 µmol/l, CPK - 2.8 µmol/l.

Coagulogram: prothrombin index - 102%, fibrinogen - 6.3 g/l, fibrinogen. Archival ECG: no changes.

ECG on admission: sinus rhythm, regular, no increase in R wave in V1-V4. ST segment depression in V1-V4.

Questions:

1. Interpret laboratory results.
2. Which method is suitable for verifying the diagnosis in this clinical situation?
3. Formulate a preliminary diagnosis.
4. Determine the leading factor in the pathogenesis of myocardial damage in this clinical situation.

Sample answer:

1. Hypercoagulation, hyperfermentemia.
2. ECG in dynamics.

3. Diagnosis: IHD, acute anterior widespread myocardial infarction without Q. Acute cardiovascular failure according to Killip I.

4. Coronary thrombosis.

Task 25.

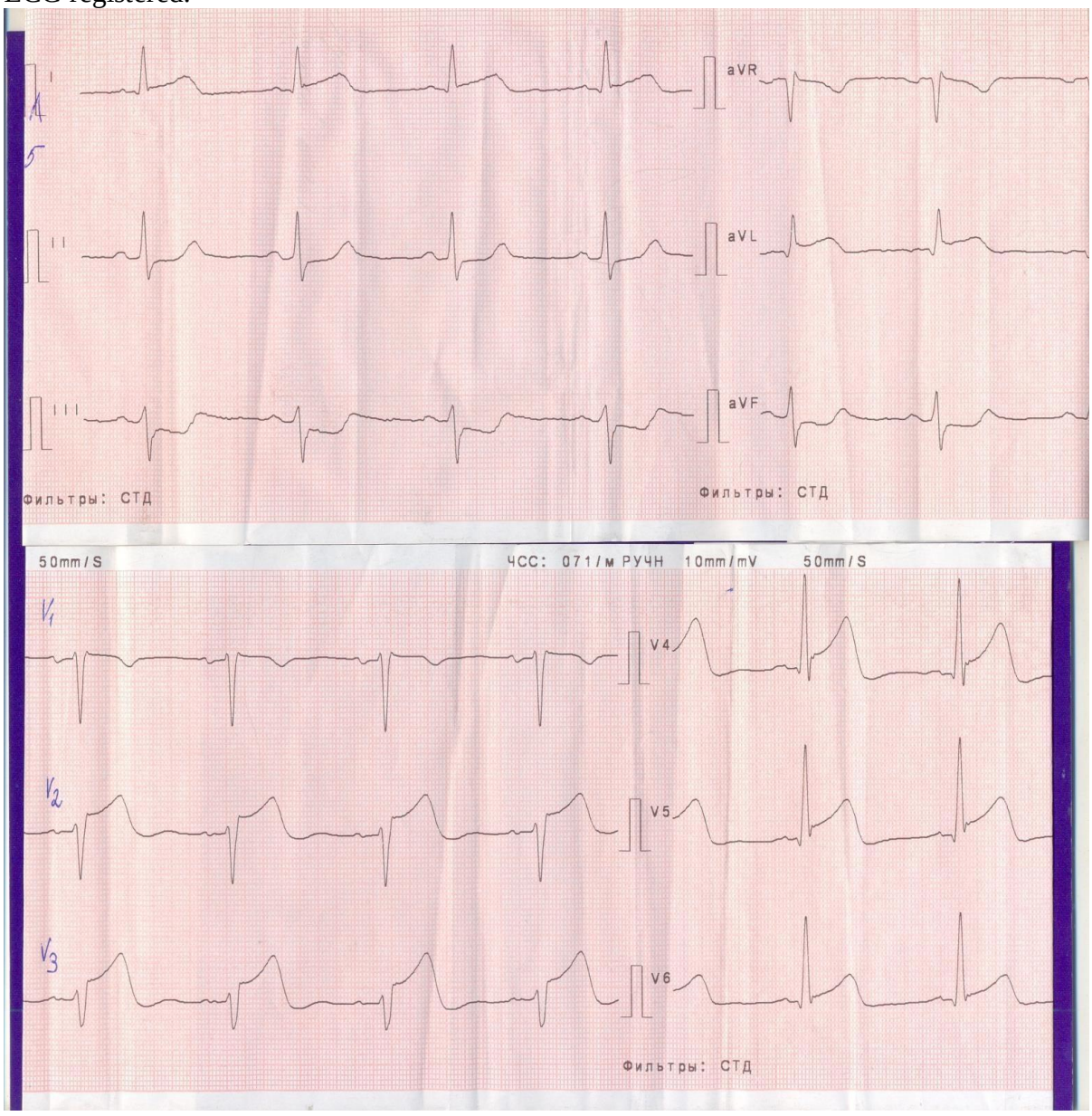
Man A., 48 years old, called an ambulance due to the appearance of pressing pain in the chest. The pain appeared 40 minutes ago, at rest, and was not relieved by 2 doses of isoket. The patient notes severe weakness and sweating.

Previously, he had not been bothered by chest pain and tolerated physical activity well.

Over the course of 6 children, blood pressure periodically increased to 160/100 mm Hg. Art. When blood pressure increased, he took Captopril, but did not receive constant antihypertensive drugs. He smokes 1 pack of cigarettes a day for 25 years. Heredity is not burdened.

Objectively: the condition is of moderate severity. The skin is moist. NPV - 18 per minute. In the lungs there is vesicular breathing, no wheezing. Heart sounds are muffled, rhythmic, heart rate - 70 beats per minute, blood pressure - 160/100 mm Hg. Art. The abdomen is soft and painless on palpation in all parts. The liver is not enlarged. The pulse in the vessels of the lower extremities is preserved.

ECG registered.



The patient was taken to the hospital emergency department with

departmentX-ray endovascular interventions within 20 minutes.

Questions:

1. Formulate a preliminary diagnosis.

2. Justify your diagnosis.

3. Draw up and justify a plan for additional examination of the patient.

4. What reperfusion method is indicated for the patient? Justify your choice.

5. What antithrombotic therapy is indicated for a patient upon admission to hospital, if it is known that it was not carried out at the prehospital stage? Test results: negative trop test, creatinine - 0.09 mmol/l, sugar - 6.5 mmol/l.

Sample answer:

1. Diagnosis: IHD. Acute coronary syndrome with ST segment elevation, anteroseptal-lateral. OSSN according to Killip 1.

Stage III hypertension, uncontrolled hypertension, risk 4 (very high).

2. The diagnosis of "IHD: acute coronary syndrome" was established on the basis of the clinical picture: chest pain that arose at rest, not relieved by Isoket, lasting 40 minutes, accompanied by weakness and cold sweat.

ECG data: ST elevation in leads I, avL, V2-V6 and reciprocal changes in III, avF indicate ACS with ST elevation of anteroseptal-lateral localization. OSHF according to Killip 1 based on the absence of signs of heart failure.

The diagnosis of hypertension was established on the basis of data on increased blood pressure over 6 years. The presence of ACS indicates stage 3 and degree 4 risk.

3. The patient needs to study markers of necrosis (troponin), creatinine, glucose. Emergency coronary angiography to detect occlusive thrombosis with subsequent restoration of blood flow in the infarct-related artery.

4. Emergency percutaneous coronary intervention is the most effective way to restore blood flow. If there is a department for x-ray endovascular interventions, PCI is necessary. The intervention is urgent because there is ST segment elevation.

5. Loading dose of Aspirin and Ticagrelor. A combination of Aspirin and Clopidogrel is possible. Heparin (low molecular weight or unfractionated). Ticagrelor is preferred over clopidogrel. Heparin infusion is stopped after PCI.

Task 26.

Patient L., 48 years old, was admitted to the emergency department with complaints of pressing pain in the epigastrium for 1 hour, when the above-described complaints first appeared. The disease is associated with intense physical activity: I had to quickly climb to the 10th floor (the elevator in the building was broken). Denies past illnesses, denies bad habits. Family history: the patient's father suffers from coronary artery disease and suffered a heart attack at the age of 45 years.

On examination: the condition is moderate. The patient has a normosthenic build, height - 165 cm, weight - 70 kg. The skin is pale, moderately moist. There is no swelling. BH -15 per minute. Auscultation over the lungs reveals hard breathing, no wheezing. The chest in the area of the heart is not changed. The apical impulse is palpated in the fifth intercostal space 2 cm medially from the left midclavicular line. The limits of relative cardiac dullness are within normal limits. On auscultation, muffled heart sounds are noted. Heart rate - 85 per minute. The rhythm is correct. There is no noise. Blood pressure 130/80 mm Hg. Art.

The abdomen is soft and painless. The liver is palpated at the edge of the right costal arch, painless. The troponin test on admission was positive. The ECG shows sinus rhythm. ST segment depression in V3-6, negative T-segment in I, V4-6.

Questions:

1. How to interpret the ECG manifestations of the disease in this patient?
2. Formulate a preliminary diagnosis.
3. Schedule an examination.
4. Prescribe treatment.

Sample answer:

1. Ischemia in the anterolateral region of the left ventricular myocardium.

2. Diagnosis: IHD: non-Q-forming myocardial infarction of the lateral wall of the left ventricle. OSSN according to Killip I.

3. Monitoring ECG and blood pressure, re-determination of troponins and MB-CK after 6 hours, performing routine tests: clinical blood and urine analysis, biochemical blood test (total protein, urea, creatinine, lipid profile, glucose, transaminases, electrolytes). EchoCG. Coronary angiography.

4. Observation of the patient in the cardiac intensive care unit for 8-12 hours. At the same time, aspirin 100-325 mg and clopidogrel 300 mg. Nitroglycerin, low molecular weight heparins (fraxiparin), ACE inhibitors (perindopril or ramipri), β-blockers (bisoprolol or metoprolol), statins (rosuvastatin or atorvastatin) are recommended.

Task 27.

Patient A. 60 years old. Complains of intense compressive pain localized behind the sternum with irradiation to the left scapula and lower jaw. The pain is prolonged and cannot be relieved by nitroglycerin.

Objectively: cold sweat. The patient is excited. Auscultatory tachycardia, muffled tones. Blood pressure 100/70 mm Hg. Art. ECG complexes QS and ST elevation above the isoline in I, aVL, V1, V2, V3, V4.

Questions:

1 What is the most reliable pathology?

2. Required research.

3.How to make a differential diagnosis

Sample answer:

1. OKS. AMI. Anteroseptal region with capture of the LV apex.
2. UAC.Troponin. Creatine phosphokenase. ECG.
3. Myocarditis. Intercostal neuralgia. Pulmonary embolism. Left-sided pleurisy.

Task 28.

Patient R., 59 years old. Noted the appearancesevere chest pain radiating to the lower jaw and left upper limb. At home, on the advice of his wife, I tried to relieve pain with Nitroglycerin without any significant effect. The total duration of the pain syndrome was more than 20 minutes, the patient called an ambulance.

From the anamnesis it is known that over the past 10 years the patient's blood pressure has been increasing, to a maximum of 170 and 90 mm Hg. Art. Smokes 20 cigarettes a day for the past 20 years. Within a month, for the first time, he noticed the appearance of chest pain after intense physical activity and that went away with rest. He was not examined and did not receive treatment. Heredity: mother - 76 years old, suffers from arterial hypertension, suffered a myocardial infarction, father - died at 55 years old from a myocardial infarction.

On examination: the condition is of moderate severity. The skin is pale. Height – 168 cm, weight – 90 kg, BMI – 32 kg/m2. Heart sounds are muffled, the accent of the second tone is heard on the aorta, the rhythm is correct. Blood pressure – 160 and 90 mm Hg. Art. Heart rate – 92 beats per minute. Breathing is vesicular, there are no adverse breath sounds. NPV –

22 per minute. The abdomen is soft and painless. The dimensions of hepatic dullness according to Kurlov are 11×9×8 cm. There is no peripheral edema.

In the tests: total cholesterol - 6.7 mmol/l, TG - 2.8 mmol/l, HDL-C - 0.62 mmol/l; fasting glucose – 5.2 mmol/l; creatinine – 124 μmol/l,

The ECG recorded sinus rhythm with a heart rate of 92 per minute, ST segment elevation up to 4 mmI, AVL, V1-5, ST segment depression up to 2 mmII, III, AVF.

Questions:

1. Guess the most likely diagnosis.
2. Justify your diagnosis.
3. What is the choice of myocardial reperfusion strategy in this case?
4. What medications do you recommend to the patient for oral antiplatelet therapy? Justify your choice.

Sample answer:

1. IBS. Acute coronary syndrome with ST segment elevation of the anterior septum, apex, and lateral wall of the left ventricle. KILLIPI gravity class. Stage III hypertension, stage 2 arterial hypertension, risk 4. CKD3aA1. Exogenous-constitutional obesity of the first degree.

2. The diagnosis of "acute coronary syndrome" was established on the basis of clinical data (presence of pain or other unpleasant sensations (discomfort) in the chest) and instrumental data (persistent ST segment elevations or "new", first-time, or presumably new-onset LBBB on the ECG). The KILLIP severity class was established on the basis of moderate shortness of breath, sinus tachycardia in the absence of the third sound and wheezing in the lungs. The stage of hypertension corresponds to III, since the patient has cardiovascular disease (CHD). Considering the presence of clinically manifest cardiovascular disease (CHD, acute coronary syndrome), the risk of cardiovascular events is assessed as very high.

3. The preferred reperfusion strategy is percutaneous coronary intervention (PCI). In settings where primary PCI cannot be performed in a timely manner, reperfusion with thrombolysis should be considered, which, in particular, can be started prehospital within the first 120 minutes from the onset of symptoms. In this case, thrombolysis should be followed by immediate transport to a PCI center for routine coronary angiography.

4. The oral dose of Acetylsalicylic acid is 150-300 mg, moving to 75-100 mg orally daily. The preferred P2Y12 receptor blockers are Ticagrelor (loading dose 180 mg followed by 90 mg twice daily). Dual antiplatelet therapy is used because it reduces the incidence of adverse coronary events by blocking alternative platelet activation pathways.

Task 29.

A 48-year-old patient woke up at night from pain in the epigastric region, accompanied by weakness, sweating, and nausea. Previously, I had not been bothered by pain and considered myself healthy. An attempt to relieve pain with a soda solution did not bring relief. After taking Nitroglycerin under the tongue, the pain decreased, but did not go away completely. Nausea, weakness, and sweating persisted. An ambulance was called in the morning.

The ECG revealed a deep Q wave in leads III and aVF; the ST segment in the same leads is raised above the isoline, arched, and turns into a negative T wave; ST segment in leads I, a VL and V1 to V4 below the isoline.

Questions:

1. What is the most likely diagnosis for this patient?
2. Justify your diagnosis.
3. Make a plan for additional examination of the patient.

4. What are your further treatment tactics?

5. Contraindications to thrombolysis.

Sample answer:

1. IHD: acute Q-myocardial infarction in the area of the lower wall.

2. The diagnosis was made based on complaints of pain in the epigastric region, accompanied by weakness, sweating, nausea; medical history: after taking Nitroglycerin under the tongue, the pain decreased; data from a clinical laboratory study: the ECG recorded revealed a deep Q wave in leads III and aVF; The ST segment in the same leads is raised above the isoline, arched, and turns into a negative T wave.

3. Clinical blood test; biochemical markers of myocardial necrosis; ECHO-KG; KAG.

4. Thrombolysis; PCI (BAP and stenting); anesthesia; antiplatelet agents; anticoagulants; ß-blockers; statins.

5. Hemorrhagic rashes; aneurysm; taking POAG; pregnancy; neoplasms.

Task 30.

A 20-year-old student, a student, complained of weakness, shortness of breath, massive swelling of the face, feet, legs, and a decrease in the amount of urine excreted per day.

From the medical history it is known that 2.5 weeks ago the young man developed a runny nose, sore and sore throat, cough with scanty gray sputum, and general malaise. I didn't take my temperature, didn't see a doctor, and continued to go to classes. I took aspirin twice on my own, used decongestants, and cough syrup. 10 days after the onset of the disease, these symptoms gradually began to decrease until they completely disappeared; slight weakness remained. Yesterday morning I suddenly noticed the appearance of massive edema, noted that I began to produce little urine, and therefore consulted a doctor. From his life history it is known that he often suffered from respiratory infections (4-5 times a year), suffers from atopic dermatitis with seasonal exacerbations, and uses corticosteroid ointments. I have headaches 1-2 times a week, which I associate with overwork at the university, and are relieved by taking Pentalgin. During medical examinations, no changes in urine tests or biochemical blood tests were ever noted. There was never any increase in blood pressure or hyperglycemia.

Objective status: general condition of moderate severity. Height 185 cm, weight 82 kg (before illness 77 kg). The skin is pale and clean. The mucous membrane of the pharynx walls is not hyperemic. The tonsils are not enlarged. Massive symmetrical uniform swelling of the face, feet, legs; when pressed, a distinct pit is formed. There was no hyperemia or hyperthermia of the skin at the site of edema formation. On percussion - a dull sound above the lower parts of the lungs, on the right - to the angle of the scapula, on the left - 2 cm below. In the lungs, breathing is vesicular, not carried into the lower sections, there is no crepitus, and no wheezing is heard. NPV 18 per minute. Heart sounds are clear, rhythmic, no murmurs. Heart rate – 80 beats/min, blood pressure – 105/65 mm. rt. Art. Percussion of the abdomen reveals a moderate amount of fluid in the peritoneal cavity. The abdomen is soft and painless. The liver is 2 cm below the edge of the costal arch. Urination is painless. Diuresis was not measured. The effleurage symptom is negative on both sides.

Used: total. protein 40 g/l, albumin 28 g/l, creatinine 110 µmol/l, urea 7.8 mmol/l, total. CS – 6.5 mmol/l. TAM – specific gravity 1021, protein 4 g/l.

Questions:

1. Formulate a diagnosis
2. What signs helped you suspect the diagnosis?

3. What diseases need to be treated differentialdiagnostics?
4. What additional studies are needed to confirm diagnosis? What specialists are needed to consult a patient?
5. Prescribe treatment

Sample answer:

1. Main: Acute post-streptococcal glomerulonephritis. Nephrotic syndrome.

Complication: effusion (exudative) bilateral pleurisy

2. The patient's age, connection with a history of acute respiratory viral infection, massive edema, decreased daily urine volume, hypoalbuminemia, hypercholesterolemia, severe albuminuria.

3. Differential diagnosis should be carried out between acute post-streptococcal glomerulonephritis and primary chronic forms of glomerulonephritis.

4. To confirm the diagnosis, the patient must additionally perform: urine analysis according to Nechiporenko, Zimnitsky test, biochemical blood test (creatinine, urea, total protein, albumin, glucose, total bilirubin and fractions, transaminases), CRP, RF, blood electrolytes (potassium, sodium, calcium), lipid profile, coagulogram, calculate GFR using CKD-EPI, determine ASL-O titer. Instrumental research methods include ultrasound of the kidneys, ultrasound of the abdominal organs, ECG, plain chest x-ray in direct projection. In cases of suspected primary chronic glomerulonephritis, a nephrobiopsy, an immunogram and an assessment of the functional activity of the complement system (C3, C4 and CH50) are indicated.

5. Hospitalization in a nephrology hospital, strict bed rest (12-18 hours/day), limiting the consumption of table salt to 3 g/day, and a slight limitation of animal protein in the diet for the entire period of the disease are indicated. Albumin preparation - IV, antiplatelet therapy (pentoxifylline IV, acetylsalicylic acid tablets 75 mg - 1 tablet in the evening). Add a thiazide (or thiazide-like) diuretic to therapy. If there are signs of a bacterial inflammatory process, consider antibacterial therapy. Based on the results of the coagulogram and the presence of a high cardiovascular risk, consider prescribing new oral anticoagulants. Immunosuppressive therapy is prescribed only in severe cases of prolonged nephrotic syndrome.

Task 31.

Patient M., 21 years old, fell ill after hypothermia. The disease began with an increase in temperature to 39°C, pain and swelling in the knee, ankle and elbow joints, enlargement and tenderness of the submandibular lymph nodes. There is a bright blush on the cheeks. I am worried about sharp pain in the lower parts of the lungs when taking a deep breath and coughing.

On examination: the condition is of moderate severity, the skin is pale, the submandibular lymph nodes are enlarged, slightly painful and hardened. Swelling of the knee, ankle and elbow joints, the skin over them is hot. Movement in these joints is painful. Disc-shaped rashes in the décolleté area. Pulse - 118 per minute, rhythmic. Blood pressure - 190/40 mm Hg. Art. The right border of the relative dullness of the heart is shifted 1 cm to the right from the right edge of the sternum, the upper border reaches the third rib, the left border is 1.5 cm to the left of the left midclavicular line. Heart sounds are weakened, systolic murmur at the apex, gallop rhythm. In the lower posterior parts of the lungs - hard breathing, pleural friction noise. Swelling of the lower extremities, arms, face.

Blood tests showed erythrocytes 3.6 million/µl, platelets – 80 thousand/µl, leukocytes – 4.6 thousand/µl, ESR – 48 mm/h. In the TAM – density 1013, protein – 5.4 g/l, altered red blood cells – 8-10 per field of view, granular and waxy cylinders.

Questions:

1. Make a guess about the diagnosis
2. What signs helped you suspect the diagnosis?
3. What diseases need to be treated differentialdiagnostics?
4. What additional studies are needed to confirm diagnosis? What specialists are needed to consult a patient?
5. Prescribe treatment

Sample answer:

1. Main: Systemic lupus erythematosus, acute course, degree of activity III (high), glomerulonephritis, nephrotic form, polyarthritis, polyserositis (pleurisy, pericarditis), anemia, discoid rash.

2. The characteristic manifestations of the disease (anemia, kidney damage, polyserositis, oligoarthritis, discoid rash, as well as a decrease in the levels of leukocytes and platelets) detected during laboratory and instrumental examination allowed us to suspect the diagnosis.

3. This clinical condition should be differentiated from primary chronic glomerulonephritis, sepsis-associated AKI, and hemoblastosis.

4. To confirm the diagnosis, the patient must additionally perform: urine analysis according to Nechiporenko, Zimnitsky test, biochemical blood test (creatinine, urea, total protein, albumin, glucose, total bilirubin and fractions, transaminases), CRP, blood electrolytes (potassium, sodium, calcium) , lipid profile, coagulogram, calculate GFR using CKD-EPI. Perform an immunogram and evaluate the complement system indicators (C3, C4, CH50), determine the titer of antinuclear antibodies (ANA), anti-dDNA antibodies, rheumatoid factor. Instrumental research methods include ultrasound of the kidneys, ultrasound of the abdominal organs, ECG, plain X-ray of the abdominal organs, puncture nephrobiopsy to verify the morphological variant of glomerulonephritis. Control of daily diuresis. Consultation with a nephrologist and rheumatologist is required.

5. Hospitalization in a rheumatology or nephrology hospital with a decision on further tactics of patient management. It should be noted that the patient is at high risk of developing AKI, requiring emergency renal replacement therapy. Currently, therapy with cyclophosphamide and systemic glucocorticosteroids (pulse therapy with transfer to tablet form) is indicated. Doses are selected individually. As nephroprotective therapy, the use of a combination of a RAAS blocker and a diuretic is indicated (for example, hydrochlorothiazide 12.5 and irbisartan 150 mg - 1 tablet in the morning), sulodexide IV course, antiplatelet agents (pentoxifylline IV, acetylsalicylic acid preparations 75 mg - 1 tablet In the evening). Based on the results of the coagulogram and the presence of a high cardiovascular risk, consider prescribing new oral anticoagulants during hospitalization. Long-term continuous monitoring by a nephrologist.

Task 32.

Patient P., 40 years old, a nurse, consulted a local general practitioner with complaints of periodically frequent painful urination, aching pain in the lumbar region without radiating, headache, and weakness. Considers himself sick for 8 years. Pain in the lumbar region is associated with physical overexertion. Over the past 3 days, she has been feeling periodic “chilling.”

Objectively: the condition is satisfactory. Slight pastiness of the legs, face and hands, pallor, body temperature - 37.3°C. On percussion over all pulmonary fields there is a clear pulmonary sound, auscultation - vesicular breathing, no wheezing. BH - 16 per minute. The limits of relative cardiac dullness are within normal limits. Heart sounds are loud and rhythmic. Blood pressure - 155/95 mm Hg. Art., heart rate - 84 per minute. My blood pressure has started to rise over the last 2 years. The tongue is dry. The abdomen is soft, painless in all parts. The liver and spleen are not palpable. There is slight pain when tapping the lumbar region, more on the right. Bad habits – smoking, alcohol – in moderation.

The following data were obtained from laboratory and instrumental studies.

Complete blood count: erythrocytes - 3.9x1012/l, hemoglobin - 107 g/l, color index - 0.7, leukocytes - 10.2x109/l, eosinophils - 2%, band neutrophils - 8%, segmented neutrophils - 48% , lymphocytes - 38%, monocytes - 4%, ESR - 25 mm/h. General urine analysis: relative density - 1010, protein - 0.04%0, leukocytes -12-16 in the field of view, nitrites - positive, red blood cells - 0-1 in the field of view, bacteriuria.

Urine according to Nechiporenko: erythrocytes - 1.2x106/l, leukocytes - 8.0x106/l.

ECG: sinus rhythm, heart rate - 86 per minute. EOS – deviated to the left. Signs of left ventricular hypertrophy.

X-ray of the chest organs: pulmonary fields without focal Andinfiltrative changes, expansion of the borders of the heart to the left.

Questions:

1. Formulate a diagnosis
2. What signs helped you suspect the diagnosis?
3. What diseases need to be treated differentialdiagnostics?
4. What additional studies are needed to confirm diagnosis? What specialists are needed to consult a patient?
5. Prescribe treatment

Sample answer:

1. Chronic right-sided pyelonephritis (E. Coli?), active phase. Concomitant: arterial hypertension, stage II, degree 1, risk 2 (medium).

2. Characteristic symptoms (general weakness, malaise, severe lower back pain on the right and increased body temperature to 37.3C with chills and sweating), a positive symptom of "effleurage" on the right.

3. Differential diagnosisshould be carried out between acute pyelonephritis and exacerbation of chronic pyelonephritis, with urolithiasis, with acute glomerulonephritis.

4. To confirm the diagnosis, the patient must perform: a general urine test, a Nechiporenko urine test, a Zimnitsky test, a general blood test, a biochemical blood test (creatinine, urea, total protein, albumin, glucose, total bilirubin and fractions, transaminases), CRP, blood electrolytes (potassium, sodium, calcium), lipid profile, calculate GFR according to CKD-EPI, urine culture for sterility and sensitivity to antibiotics, ASL-O titer. An ultrasound of the kidneys, a plain X-ray of the chest organs, and an ECG are also required. To exclude obstruction of the urinary tract, as well as to select adequate therapy, consultation with a urologist or nephrologist is necessary.

5. In case of uncomplicated non-obstructive pyelonephritis, empirical antibiotic therapy is required (for example, Ciprofloxacin IV 400 mg
- 2 times a day for 7 days), antispasmodic therapy (Drotaverine hydrochloride 40 mg 3 times a day, IM or IV), detoxification therapy (oral rehydration - drinking

volume 2-4 liters/day, or infusion therapy 5% glucose solution 400-800 ml IV drip for 1-5 days or 0.9% NaCl 00-800 ml IV drip for 1-5 days or Reamberin
400 ml IV drip - 3-5 days), antiplatelet therapy (for example, acetylsalicylic acid drugs at a dose of 75-150 mg/day or pentoxifylline 5-10 ml per 20 ml 0.9% NaCl IV drip 5-10 days), preparations based on cranberries. The patient is recommended bed rest, the use of RAAS blockers (perindopril starting dose 5 mg 1 time in the morning) in combination with calcium channel blockers (amlodipine starting dose 5 mg 1 time in the morning). Dynamic observation by a nephrologist and urologist.

Task 33.

Male, 42 years old. I consulted a therapist with complaints of weight loss for a month and swelling under the eyes. At the end of the day, swelling of the face decreases, but swelling of the ankles increases. Temperature during examination – 37.2 C, blood pressure – 152/88 mm Hg, pulse – 80 beats/min, respiratory rate – 16/min. Ankle swelling 2+.

Blood test results: Red blood cells - 3.9 $\times 10^{12}$/l, hemoglobin - 110 g/l, leukocytes - 8 ×109 /l, platelets - 200 ×109 /l, blood test: creatinine - 188 μmol/l, urea 12.1 mmol/l, albumin – 22 g/dl, o. cholesterol - 6.8 mmol\l, TAG - 1.5 mmol\l, LDL - 5.9 mmol\l, HDL - 0.4 mmol\l, sodium - 135 mmol\l, potassium - 4.0 mmol\ l. TAM: density - 1018, glucose - none, protein - 4g/l, leukocytes - 1-2 in the field of view, erythrocytes - 5-10 in the field of view, changed

Questions:

1. Formulate a diagnosis
2. What signs helped you suspect the diagnosis?
3. What diseases need to be treated differentialdiagnostics?
4. What additional studies are needed to confirm diagnosis? What specialists are needed to consult a patient?
5. Prescribe treatment

Sample answer:

1. Acute glomerulonephritis. Nephrotic syndrome. Arterial hypertension stage I, degree 1, risk 2 (medium).

2. General examination data - swelling under the eyes, in the ankle area, laboratory data - hypoalbuminemia, albuminuria, dyslipidemia.

3. Differential diagnosis should be carried out with other diseases occurring with nephrotic syndrome: autoimmune diseases, lymphomas, hematological malignancies, infections, taking medications.

4. To confirm the diagnosis, the patient must undergo, including in dianmic: a general urine test, a urine test according to Nechiporenko, a Zimnitsky test, a study of daily proteinuria, a general blood test, a biochemical blood test (creatinine, urea, total protein, albumin, glucose, total bilirubin and fractions, transaminases), CRP, blood electrolytes (potassium, sodium, calcium), lipid profile, calculate GFR using CKD-EPI. An ultrasound of the kidneys, an ECG, and a nephrobiopsy of the kidneys are also required. It is necessary to refer the patient to a nephrologist.

5. Treatment for these patients includesseveral components: a diet with limited intake of sodium, animal protein and fat. etiotropic treatment (after establishing the cause of nephrotic syndrome), treatment aimed at reducing edema (diuretic therapy, albumin), sorbents (polysorb, enterosgel), cation exchange resins for hyperkalemia, prevention of thrombotic complications in turn (antiplatelet agents, anticoagulants). Thiazide/thiazide-like diuretics (hydrochlorothiazide 12.5 mg/day or indapamide 1.5 mg/day) in combination with RAAS blockers and ACE inhibitors/ARBs with dual elimination (eg, fosinopril 5 mg). Nephroprotective

therapy with NGLT2 inhibitors (dapagliflozin), sulodexide, statins. Upon achieving remission, consider the need to include keto analogues of amino acids in therapy. Dynamic observation by a nephrologist.

Task 34.

The patient, M., 23 years old, was taken to the hospital in an extremely severe state of shock, which developed as a result of an injury received in a car accident. Blood pressure 70/50 mm Hg. Art. The daily amount of urine is 78 ml, the protein in the urine is 0.7 g/l, the relative density of urine is 1.025. Biochemical blood test: creatinine 137 mmol/l, blood urea – 36 mmol/l.

Questions:

1. What pathological process can be assumed in this case, the causes?
2. What is the mechanism of development of renal dysfunction?
3. What are the mechanisms for the development of hyperazotemia in a patient?
4. List diagnostic methods in this clinical situation?
5. Patient management tactics

Sample answer:

1. Acute kidney injury, stage 1. The main reason is shock as a result of massive blood loss, a decrease in blood volume, destruction of soft tissues and an increase in myoglobin, kidney damage and acute disturbance of intraglomerular hemodynamics.
2. The main link in the pathogenesis is a violation of renal blood flow, accompanied by a significant decrease in glomerular filtration. The following are important: a critical drop in renal blood flow, vasoconstriction of the renal arterioles as a reaction to arterial hypotension, platelet aggregation and microthrombosis in the microvasculature. An important role in the design of arterioles belongs to serotonin, prostaglandins and catecholamines.
3. A sharp decrease in the number of functioning nephrons leads to the accumulation of products of nitrogen metabolism in the bloodstream, such as urea, residual nitrogen, etc. In addition, there was an increased breakdown of proteins as a result of soft tissue injury, and their release into the bloodstream of myoglobin, the appearance of which in the urine can indicate an additional factor for AKI.
4. The patient needs to undergo a full blood test, a complete blood test, a blood test, a determination of myoglobin in the urine, a coagulogram, and blood electrolytes. In order to find the source of bleeding, use imaging research methods: ultrasound of the abdominal organs (CT of the abdominal cavity, pelvis, chest), etc.
5. After identifying the source of bleeding and stopping it, the BCC should be restored with the help of infusion of blood and plasma-substituting solutions, crystalloids, and saline. solution, etc. It is necessary to consider the feasibility of using anticoagulants (UFH, LMWH) and antiplatelet agents (ASA, pentoxifylline), nephroprotectors (RAAS blockers in small doses), sorbents and drugs to improve intraglomerular hemodynamics (sulodexide, etc.), antihypoxants, detoxification therapy (Reamberin), etc. If there is no effect and creatinine increases by more than 3 times the basal level, consider the need for renal replacement therapy (acute hemodialysis). Observation by a nephrologist for 3 months.

Task 35.

A 47-year-old man was admitted to the nephrology department with complaints of severe headaches and skin itching for the last month, abdominal pain, nausea, vomiting and loose stools. From the anamnesis it is known that he has been suffering from pyelonephritis for 25 years. Objectively: a petechial rash and signs of scratching are visible on the skin of the arms and chest, the skin is dry, there is whitish dust at the roots of the hair, ammonia is coming from the mouth. A murmur is heard in the area of the heart

pericardial friction. Noisy Kussmaul breathing is noted. The abdomen is painful on palpation along the large intestine and in the epigastric region.

Questions:

1. What complication arose in the patient against the background of the underlying disease? What are the stages of this process? What stage of the disease is the patient at?
2. Etiological factors of this pathology (classification).
3. What is the cardiovascular syndrome of this pathology?
4. What explains skin itching and dyspeptic disorders?
5. List the features of patient management

Sample answer:

1. End-stage renal failure (ESRD). There are 5 stages of CKD based on the level of GFR (ml/min/1.73 m2). In this case, the patient has C5 (ESRD), stage of uremia.
2. The causes of CKD are divided into prerenal (hypotension, shock, hypovolemia, renal artery stenosis, liver cirrhosis, etc.), renal (acute tubular necrosis, acute interstitial nephritis, rhabdomyolysis, post-contrast AKI, chronic glomerulonephritis, etc.) and postrenal (BPH , cervical cancer, urinary tract obstruction). In this case, the cause was chronic pyelonephritis associated with obstruction. With each exacerbation, there was a gradual decrease in the number of functioning nephrons, progressive replacement of the glomeruli with connective tissue, their sclerosis, tubular atrophy, death and loss of renal function.
3. At the stage of uremia, intoxication of the body develops with metabolic products that are normally excreted by the kidneys; the release of nitrogenous products through the mucous and serous membranes of organs is characteristic. Uremic aseptic myocarditis and pericarditis may develop, uremic pericarditis may occur, and a pericardial friction rub may appear. In addition, a malfunction of the Na-K pump develops. This leads to hyperkalemia. The latter is one of the most dangerous complications of CKD. With high hyperkalemia (more than 6.5 mmol/l), muscle and nerve cells lose their ability to excitability, which leads to convulsions, damage to the central nervous system, coma, cardiac arrhythmias, even asystole.
4. The skin with CKD5 and the progression of uremia acquires a gray-earthy color or brown as a result of the accumulation of urochrome, in addition, patients are often bothered by itching as a result of the accumulation of excess urea in the skin. Sometimes, especially on the face, the skin appears to be powdered with a whitish powder (these are chlorides, crystals of urea and uric acid - the so-called “uremic frost”). Uremia significantly affects the functioning of the gastrointestinal tract. Uremic ulcerative stomatitis and gastroenteritis and, as a result, diarrhea, are indirect results of high concentrations of urea in saliva and gastric juice. Bacterial urease breaks down urea into ammonia, which causes damage to the mucous membrane.
5. The patient requires dynamic observation by a urologist, nephrologist and cardiologist, as well as consultation with a dialysis nephrologist to decide on treatment with program hemodialysis and the formation of an arteriovenous fistula. Timely initiation of renal replacement therapy is required due to the very high cardiovascular risk. The patient requires a full blood test, a full blood test, a complete blood count, CRP, determination of ferrokinetics indicators (iron, ferritin, TBC, transferrin), levels of calcium, PTH, phosphorus, magnesium and chlorine. Ultrasound of the heart, ultrasound of the abdominal organs and kidneys, coagulogram.

Task 36.

A 56-year-old man, an engineer, complained of increased blood pressure (maximum up to 170/105 mm Hg) for 6 months, accompanied by headaches in the occipital and

temporal areas. From the anamnesis it is known that the patient has been suffering from arterial hypertension for about 6 years, however, despite the recommendations of doctors, he does not take constant antihypertensive therapy. During the last visit to the therapist six months ago, the blood pressure was recorded at 170/100 mm. rt. Art.; urine analysis revealed albuminuria 100 mg/day. Heredity is burdened: a 79-year-old mother has suffered from hypertension since a young age, and also has a history of coronary artery disease and suffered a myocardial infarction; father died at 50 from myocardial infarction. Bad habits: smokes for more than 30 years, ½ pack of cigarettes a day.

Objective status: General condition is satisfactory. BMI – 31.8 kg/m2. Waist circumference – 106 cm. The skin is of normal color, clean, moist. Lymph nodes are not enlarged. NPV – 16/min. The percussion sound is clear, pulmonary. In the lungs there is vesicular breathing, no wheezing. The boundaries of the heart are not expanded, the tones are muffled, rhythmic, the accent of the second tone is over the projection of the aorta, there are no noises. Heart rate – 72 beats/min, blood pressure – 160/100 mm. rt. Art. The abdomen is soft, painless on palpation. The liver and spleen are not enlarged. The kidneys are not palpable, the effleurage symptom is negative on both sides. The thyroid gland is not enlarged. The neurological status did not reveal focal symptoms.

This is the norm at UAC. B/x: glucose 6.4 mmol/l, creatinine 128 μmol/l, total. CS – 5.3 mmol/l, LDL – 3.9 mmol/l.

OAM – albuminuria 190 mg/day.

Questions:

1. Make a guess about the diagnosis.
2. What signs helped you suspect the diagnosis?
3. What diseases need to be differentiated diagnostics?
4. What additional studies are needed to confirm diagnosis? What specialists are needed to consult a patient?
5. Prescribe treatment.

Sample answer:

1. Basic Arterial hypertension stage III, degree 2, risk 4 (very high).

Complicated hypertensive nephropathy. CKD C3a (GFR according to CKD-EPI 54 ml/min/1.73 m2), A2.

Related IHD, PICS (bdu). Alimentary-constitutional obesity of the 1st degree.

2. The diagnosis was suspected on the basis of increased blood pressure, characteristic complaints, life history and disease data, as well as the results of a biochemical blood test (creatinine), TAM (albuminuria).

3. Differential diagnosis should be carried out with secondary arterial hypertension: vasorenal (since the patient has a history of coronary artery disease and previous AMI) and renoparenchymal (presence of protein in the urine, increased blood pressure).

4. UAC, OAM, used blood test. Instrumental methods: ABPM, ECG, EchoCG, ultrasound of the kidneys, ultrasound of the brachiocephalic arteries. Consultation with an ophthalmologist – examination of the fundus. Consultation with a cardiologist - for management and dynamic monitoring of the patient, consultation with a nephrologist - for management and dynamic monitoring of the patient. Consultation with an endocrinologist - to exclude carbohydrate metabolism disorders and discuss the principles of rational nutrition with the patient.

5. In order to reduce cardiovascular risk, it is recommended to include RAAS blockers in therapy under blood pressure control (taking into account that for A2 albuminuria, the target SBP level should be in the range of 120-130 mmHg). To control blood pressure and heart rate - a beta-blocker (for example, bisoprolol 5 mg - 1 tablet in the morning), for secondary prevention in case of coronary artery disease, as well as for a patient with CKD and a very high

cardiovascular risk - acetylsalicylic acid (75 mg - 1 tablet In the evening). WITH

In order to enhance the nephroprotective effect, inclusion of the NGLT-2 group in the drug regimen under the control of blood glucose levels should be considered. Based on the results of the lipid profile, lipid-lowering therapy should be considered (eg, rosuvastatin 20 mg - 1 tablet in the evening).

Task 37.

A 71-year-old woman complained of shortness of breath with slight physical exertion, sometimes at rest, and an increase in blood pressure to 160/100 mm. rt. Art., tinnitus, lower back pain. She considers herself sick for 10 years, when she began to notice an increase in blood pressure with maximum values of 160-170/100 mm. rt. Art., accompanied by deterioration of the condition and the appearance of the above-described complaints. Until this time, her blood pressure was not controlled and she did not receive antihypertensive therapy. The patient was selected for therapy with amlodipine and indapamide. Subsequently, I felt well, blood pressure was at the target level. Over the past 3 months, he has noted an increase in blood pressure to 170/100 mm. rt. Art. Heredity is aggravated by cardiovascular diseases: her father had arterial hypertension from the age of 40, her mother had a transient ischemic attack at the age of 54.

Objective status: General condition is relatively satisfactory. The skin is of normal color and moisture. BMI – 36 kg/m2. Pastiness of the legs. Lymph nodes are not enlarged. NPV – 18/min. Percussion sound is clear pulmonary. The breathing in the lungs is harsh, there is no wheezing. The borders of the heart are slightly expanded to the left, sonorous, rhythmic, no murmurs. Heart rate –80 beats/min, extrasystole. Blood pressure – 160/80 mm. rt. Art. The abdomen is soft, painless on palpation. The liver and spleen are not enlarged. The kidneys are not palpable. The effleurage symptom is positive on both sides. The thyroid gland is not enlarged. The neurological status did not reveal focal symptoms. UAC is the norm. B/x: glucose 5.3 mmol/l, creatinine 149 μmol/l, urea 9.2 mmol/l, total. cholesterol 4.99 mmol/l, LDL – 3.2 mmol/l.

OAM – cloudy urine, leukocytes cover the entire field of view, bacteriuria more than 107, albuminuria 250 mg/day.

Ultrasound of the kidneys: the kidneys are usually located, of normal size, the thickness of the parenchyma is up to 12-13 mm, with uneven contours, dilatation of the peripheral joints of both kidneys, no shadows of stones were detected, on both sides there are multiple sinus cysts with a diameter of 13-17 mm.

Questions:

1. Formulate a diagnosis
2. What signs helped you suspect the diagnosis?
3. What diseases need to be differentiated diagnostics?
4. What additional studies are needed to confirm diagnosis? What specialists are needed to consult a patient?
5. Prescribe treatment

Sample answer:

1. Basic Chronic pyelonephritis in the acute stage.

Background: Arterial hypertension stage II, degree 2, risk 3 (high) Complicated. Kidney cysts. Hypertensive nephropathy, CKD C3b (GFR according to the formula CKD-EPI: 30 ml/min/1.73 m2), A2.

Concomitant: Alimentary-constitutional obesity of the 2nd degree.

2. The diagnosis was suspected on the basis of increased blood pressure, characteristic complaints, biochemical blood test data (increased creatinine and urea), TAM data (albuminuria, bacteriuria), and kidney ultrasound data.

3. With secondary arterial hypertension: vasorenal, endocrine, central, autosomal dominant polycystic kidney disease.

4. KBC, OAM, blood test, lipidogram, CRP. Instrumental methods: ABPM, ECG, EchoCG, ultrasound of the renal arteries, ultrasound of the brachiocephalic arteries. Consultation with an ophthalmologist – examination of the fundus. Consultation with a nephrologist and endocrinologist.

5. It is necessary to optimize the treatment regimen. Add RAAS blockers (for example, ramipril or perindopril) to reduce the risk of cyst rupture, try to remove indapamide from the regimen. Amlodipine and a RAAS blocker - prescribe in one tablet as a fixed combination once a day. Add acetylsalicylic acid (75 mg – 1 tablet in the evening). Add statins - rosuvastatin 10 mg - 1 tablet in the evening after dinner. In order to enhance the nephroprotective effect, the inclusion of the iNGLT-2 group in the drug regimen under the control of blood glucose levels should be considered. Repeated consultation with test results and after 1 month.

Task 38.

A 35-year-old woman complained of increased fatigue, periodic nagging pain in the lumbar region, polyuria, and headaches. I have been experiencing discomfort in the lumbar region for about 5 years; there were 2 episodes of pyelonephritis. Polyuria appeared 2 years ago. For the last year I have been worried about headaches, with one-time measurements of blood pressure 140-150/90-100 mm. rt. Art. Heredity: father - missing; mother - died at the age of 55 from complications of end-stage renal failure of unknown etiology; The patient's sister has been suffering from a kidney disease she doesn't know for 20 years; maternal aunt, 60 years old – cysts in the kidneys, hypertension.

Objective status: general condition is satisfactory. Weight 60 kg, height 165 cm. The skin is pale and clean. There is no swelling. Zev is clean. Lymph nodes are not enlarged. NPV – 18/min. The percussion sound is clear, pulmonary. In the lungs there is vesicular breathing, no wheezing. The borders of the heart are not expanded, sonorous, rhythmic, no noise. Heart rate – 76 beats/min. Blood pressure – 150/90 mm. rt. Art. The abdomen is soft, slightly painful in the mesogastrium. The liver is enlarged. Enlarged, tuberous kidneys are palpated. Tapping on the lumbar region is sensitive on both sides. Urination is painless.

UAC is the norm. B/x: urea 9 mmol/l, creatinine 119 μmol/l. OAM –

cloudy urine, protein 0.2 g/l, 8-10 red blood cells in the field of view.

Ultrasound of the kidneys: the kidneys are enlarged, with uneven contours. Multiple round anechoic formations (cysts) with a diameter of 1 to 3 cm, diffusely located in the cortical, medullary and subcapsular layers. Cortico-medullary differentiation is not visible.

Questions:

1. Formulate a diagnosis
2. What signs helped you suspect the diagnosis?
3. What diseases need to be differentiated diagnostics?
4. What additional studies are needed to confirm diagnosis? What specialists are needed to consult a patient?
5. Prescribe treatment

Sample answer:

1. Basic Autosomal dominant polycystic kidney disease.

Complication: secondary symptomatic (renoparenchymal) arterial hypertension stage II, degree 1. CKD C3a (GFR according to CKD-EPI formula: 51 ml/min/1.73 m2), A2

Concomitant: nutritional and constitutional obesity of the 2nd degree.

2. The diagnosis was suspected on the basis of characteristic complaints, a burdened hereditary history, objective examination, and biochemical analysis data

blood (increased urea and creatinine), OAM data (albuminuria, microhematuria), kidney ultrasound data.

3. With polycystic kidney diseasecomplication of chronic diseases, for example, chronic pyelonephritis.

4. KBC, TAM, Blood biochemistry (glucose, creatinine, detailed lipid profile, total protein, urea, ALT, AST, bilirubin, alkaline phosphatase). Instrumental methods: ultrasound of the kidneys, ultrasound of the abdominal organs. Consultation with a nephrologist.

5. It is necessary to include RAAS blockers (eg, irbesartan) in therapy under blood pressure control. Irbesartan can be prescribed as a fixed combination with amlodipine in one tablet. Add acetylsalicylic acid (75 mg - 1 tablet in the evening) In order to enhance the nephroprotective effect, you should consider including an NGLT-2 group in the drug regimen under the control of blood glucose levels. The patient requires constant follow-up with a nephrologist in order to select therapy and assess the dynamic condition of the kidneys.

Task 39.

A chest x-ray of a farmer working with hay revealed a diffusely enhanced deformed pulmonary pattern, as well as many scattered pneumonia-like shadows.

Questions:

1. What disease are these changes characteristic of?
2. What method is used to confirm the diagnosis of exogenous allergicalveolitis (hypersensitivity pneumonitis)?
3. What drug is usually used to relieve the acute form of exogenous allergic alveolitis (hypersensitivity pneumonitis)?

Sample answer:

1. These changes are characteristic of exogenous allergic alveolitis (hypersensitivity pneumonitis).
2. The diagnosis is confirmed by the detection of antibodies to the suspected allergen in the blood.
3. GCS (Prednisolone).

Task 40.

List the criteria for unfavorable rapidly progressive pulmonary fibrosis in systemic scleroderma and other interstitial lung diseases with a rapidly progressive fibrotic phenotype?

Sample answer:

1) decrease in FVC >10% compared to the previous one;

2) a decrease in FVC by 5-10% compared to the previous one in combination with a worsening of symptoms and/or HRCT picture caused by ILD;

3) decrease in FVC <5% compared to the previous one in combination with an increase in the volume of lung damage according to HRCT and worsening of symptoms;

4) initial pronounced fibrotic changes in the lungs on a conventional X-ray or HRCT in combination with FVC less than <70% of the proper value and/or DLco < 60% of the proper value.

Task 41.

The patient, 19 years old, complains of a cough with the release of mucopurulent sputum up to 150 ml per day, pain in the right side when breathing, increased body temperature up to 37.5˚, chills, shortness of breath.

Considers himself sick since childhood. He was treated for chronic bronchitis. Exacerbations several times a year, exacerbations occur with the release of significant

amounts of mucopurulent sputum, sometimes mixed with blood. The last exacerbation began 5 days ago after hypothermia. The disease began with chills, an increase in body temperature to 38.5°C, then the cough intensified, and the amount of sputum increased. During treatment with antibiotics, the patient's condition improved, but the cough and low-grade fever persisted.

Objectively: the general condition is of moderate severity. The skin is of normal color. The nail plates look like watch glasses, and the terminal phalanges of the fingers look like "Drumsticks". The chest is regular in shape and symmetrical. During percussion on the left front in the lower parts there is a moderate dullness of the percussion tone. Auscultation also reveals hard breathing, moist rales of various sizes, heart rate = 98 per minute. The boundaries of the heart are within normal limits. BP=120/75 mm Hg. Art.

In the general blood test, hemoglobin is 110 g/l, leukocytes are 12x109//l, ESR is 30 mm/h. General urine analysis without pathology. On the radiograph of the chest, the lingular segments on the left are reduced in volume, in the projection of the lingular segments there is an increase and cellular deformation of the pulmonary pattern.

Questions:

1. Preliminary diagnosis.
2. Additional studies to clarify the diagnosis
   Andoptimize treatment.
3. What is expected to be seen on a CT scan of the lungs?
4. The most likely causative agents of the disease.
5. The most effective drugs for empirical therapy.

Sample answer:

1. bronchiectasis with damage to S4.5 of the left lung;
2. computed tomography of the lungs, mole culture microflora,bronchoscopy;
3. on the left, the lingular segments are reduced in volume, the expansion of the subsegmental bronchi is determined;
4. gram-negative microflora, pneumococcus, Staphylococcus aureus;
5. imipenem or meropenem.

Task 42.

The patient, 25 years old, complains of a cough with the release of mucopurulent sputum up to 200 ml per day, pain in the right side when breathing, an increase in body temperature to 37.6˚, chills, shortness of breath.

Considers himself sick since childhood. He was treated for chronic bronchitis. Exacerbations occur several times a year; exacerbations occur with the release of a significant amount of mucopurulent sputum, sometimes mixed with blood. The last exacerbation began 6 days ago after hypothermia. The disease began with chills, body temperature rising to 38.6°C, cough intensified, and the amount of sputum increased. During treatment with antibiotics, the patient's condition improved, but the cough and low-grade fever persisted.

Objectively: the general condition is of moderate severity. The skin is of normal color. The nail plates look like watch glasses, and the terminal phalanges of the fingers look like "Drumsticks". The chest is regular in shape and symmetrical. During percussion on the left front in the lower parts there is a moderate dullness of the percussion tone. Auscultation also reveals hard breathing, moist rales of various sizes, heart rate = 98 per minute. The boundaries of the heart are within normal limits. BP=120/75 mm Hg. Art.

In the general blood test, hemoglobin is 110 g/l, leukocytes are 12x109//l, ESR is 30 mm/h. General urine analysis without pathology. On the radiograph of the OGK, the middle lobe on the right is slightly reduced in volume, in the projection of the middle lobe there is an increase and cellular deformation of the pulmonary pattern.

Questions:

1. Preliminary diagnosis.
2. Additional studies to clarify the diagnosis
   Andoptimize treatment.
3. What do you expect to see on a CT scan of the lungs?
4. The most effective drug for empirical therapy.

Sample answer:

1. bronchiectasis with damage to the middle lobe of the right lung in the acute phase;
2. computed tomography of the lungs, mole culture
   microflora,bronchoscopy;
3. on the right, the average share is reduced in volume, a cavity is determined
   Withhorizontal liquid level;
4. meropenem.

Task 43.

A 43-year-old patient complains of a cough with 150-200 ml of foul-smelling mucopurulent sputum, an increase in body temperature to 37.6°C, and general weakness.
I fell ill 7 days ago, after hypothermia, chills appeared, body temperature rose to 39.6°, cough with scanty sputum. He was treated for "flu", took azithromycin and NSAIDs. After 6 days, foul-smelling purulent sputum began to be released in large quantities "mouth full", after which the patient's condition improved, the body temperature became low-grade, and the symptoms of intoxication decreased.

An objective examination revealed a general condition of moderate severity. Various moist rales are heard over the lower and middle parts of the right lung. The boundaries of the heart are within normal limits. Heart sounds are rhythmic and clear. Heart rate = 96 per minute, blood pressure
= 130/80 mm Hg. Art. Abdominal organs without pathology. The spleen is not palpable. There is no peripheral edema. Physiological functions are not impaired.

An X-ray in the S6 projection revealed a cavity with thick walls (4 cm in diameter) and perifocal infiltration. The content of leukocytes in the blood is 15.4x109/l, band neutrophils are 12%, ESR is 36 mm/h.

Questions:

1. Preliminary diagnosis.
2. Additional studies to clarify the diagnosis
   Andoptimize treatment.
3. The most likely causative agents of the disease.
4. The most effective drug in this case.

Sample answer:

1. abscess of the lower lobe of the right lung;
2. computed tomography of the lungs, mole culture
   microflora,bronchoscopy;
3. Staphylococcus aureus, gram-negative microflora, anaerobes;
4. imipenem.

Task 44.

Patient R., 38 years old, is an auxiliary worker by profession. I went to the clinic to see a general practitioner with complaints of an increase in temperature to 38.0 ºC, a cough with moderate amounts of mucopurulent sputum, mild pain in the chest when coughing, headache, weakness in the limbs, sweating. He became acutely ill after hypothermia. Bad habits: smokes 20 cigarettes a day for more than 15 years; there are no associated diseases.

Objective data: the skin is pale and moist. The patient's excessive sweating is noteworthy. In the lungs, breathing is weakened on the right, multiple moist fine rales are heard at the angle of the right scapula. RR at rest up to 22/min. Heart sounds are muffled, rhythmic, single extrasystoles. Heart rate – 100 beats/min, blood pressure – 110/70 mm Hg. Art. The abdomen is soft and painless. In other organs and systems without visible pathological abnormalities.

Laboratory and instrumental examination methods: Clinical blood test: hemoglobin – 135 g/l, erythrocytes 4.7×1012/l, leukocytes 11×109/l, band
– 28%, segmented – 57%; ESR – 35 mm/hour. General urine analysis: relative density – 1018, protein – 0.99 g/l, hyaline casts. Biochemical blood test: ALT – 58 units/l; AST – 100 units/l; creatinine – 115 μmol/l; fibrinogen – 8 g/l. ECG: Sinus rhythm, regular, heart rate – 100 beats/min, focal changes in the myocardium, no myocardial hypertrophy. X-ray of the chest organs: focal infiltration in the basal parts of the right lung, deformation of the root of the right lung.

Questions:

1. Guess the most likely diagnosis.
2. Justify your diagnosis.
3. Draw up and justify a plan for additional examination of the patient.
4. What groups of antibiotics are recommended for the patient for initial antibiotic therapy; stratify disease severity and risk factors.

Sample answer:

1. Community-acquired right-sided pneumonia, non-severe course.
2. The diagnosis of "community-acquired right-sided pneumonia" was established on the basis of the patient's complaints of fever, cough with mucopurulent sputum, mild pain in the chest when coughing, sweating, and medical history (acute development of the disease after hypothermia); examination data (focus of weakened breathing, the presence of multiple moist fine rales during auscultation at the angle of the right scapula); based on a blood test (leukocytosis, band shift), based on x-ray data (focal infiltration in the basal parts of the right lung). It should be noted that there are no criteria for severe pneumonia.
3. The patient is recommended to: perform a respiratory function test to detect respiratory failure.
4. Patientwith non-severe community-acquired pneumonia, there are no risk factors for pathogen resistance. The first choice antibiotics are Amoxicillin or new macrolides (Clarithromycin, Azithromycin) since this patient is young and the likely pathogens may be S. Pneumoniae, H. Influenzae, Mycoplasma pneumonia.

Task 45.

In a patient with community-acquired right-sided pneumonia of a non-severe course, after 3 days of therapy (Amoxicillin 500 mg 3 times or Azithromycin 500 mg 1 time per day), body temperature returned to normal - 36.8 ° C, intoxication decreased (decreased weakness, sweating, improved appetite), shortness of breath has decreased.

Questions:

1. How can you assess the patient's clinical condition?
2. You can use the given conditions of the task to judge adequacyantibacterial therapy?
3. What are your further treatment tactics?

Sample answer:

1. Against the background of prescribed antibacterial therapy, there is a positive trend in the patient's clinical condition.

2. The above changes make it possible to judge the adequacy of the initiated antibacterial therapy.

3. It is necessary to continue antibiotic therapy without changes for another 3-4 days and continue dynamic observation. Monitoring of a general blood test after 7 days, X-ray monitoring of the chest organs.

Task 46.

A 54-year-old patient complains of an unmotivated increase in cough with scant sputum for 3 months. Moderate cough with scant sputum for many years (smoking experience 30 pack-years). The patient did not pay attention to the cough for a long time, but recently the cough became significantly worse and forced the patient to seek medical help. History of chronic bronchitis.

On objective examination, the general condition is satisfactory. Body temperature 36.9°. Lymph nodes accessible to palpation are not enlarged and painless. The chest is of regular shape and evenly participates in the act of breathing. Percussion and palpation revealed no pathology. On auscultation, breathing is harsh, there are no wheezes. NPV
- 17 in 1 min. Heart sounds are rhythmic, somewhat muffled, heart rate - 82 per minute. A/D - 130/80 mm Hg. Art. The abdomen is soft, painless, the liver is not enlarged, painless, the spleen is not palpable. Physiological functions are not impaired. An x-ray of the chest organs in the middle lobe on the right reveals a rounded formation 2.5 cm in diameter with a clear and uneven (scalloped) contour and the presence
“crown”, located at a sufficient distance from the root. The roots are light and of normal size, structural. In the general blood test: ESR - 25 mm/h, otherwise without pathology. General analysis of sputum: mucous in nature, leukocytes - in small quantities, no atypical cells were found.

Questions:

1.Formulate a preliminary diagnosis and justify it.

2.What focal lung lesions need to be differentiated in this case?

3. What additional research is needed to clarify the diagnosis?

4.Name the main method of treatment in this case.

Sample answer:

1.Diagnosis: peripheral cancer of the middle lobe of the right lung. The diagnosis was made on the basis of radiological signs of peripheral lung cancer in a 54-year-old man, a heavy smoker.

2.Peripheral lung cancer, pulmonary tuberculosis. pneumonia, pulmonary infarction, "eoosinophilic pneumonia".

3) Additional examination is necessary: computed tomography of the lungs, consultation with a phthisiatrician, possible sputum culture for tuberculosis, diaskintest; computed tomography of the lungs, histological examination of a biopsy specimen of a focal formation in the lungs.

4) Surgery.

Task 47.

Patient N., 48 years old, has been suffering from diabetes mellitus for 3 years. Over the past 6 months, he has been worried about increasing weakness, fatigue, and cough with sputum. Periodically notes an increase in body temperature. I did not consult a doctor, since the listed complaints are associated with diabetes mellitus. During the next preventive fluorographic examination, pathological changes in the lungs were revealed.

X-ray - in the right lung from the apex to the third rib, an inhomogeneous darkening with clearing in the center of 2x3 cm is determined, the contours are unclear. In the surrounding lung tissue there are focal shadows of low intensity. In the general blood test: leukocytes - 11.0 × 109/l, band neutrophils - 12%, segmented neutrophils - 58%, lymphocytes - 19%, monocytes - 11%, ESR - 18 mm/hour. Reaction to the Mantoux test with 2 TE
– papule 11 mm. Due to pulmonary hemorrhage, sputum examination for MBT was not performed.

Questions:

1. List the diseases that can be thought of in this case.
2. Make a diagnosis.
3. Give reasons for the diagnosis.
4. Explain the low severity of clinical symptoms.
5. Give recommendations for further management of the patient and justify them.

Sample answer:

1. Pneumonia? Pulmonary tuberculosis?
2. Infiltrative tuberculosis of the upper lobe of the right lung in the phase of decay and contamination of the office? 1A group DU.
3. The diagnosis was made on the basis of characteristic clinical manifestations - the presence of signs of tuberculosis intoxication and pulmonary symptoms; X-ray data - characteristic localization in the upper lobe with foci of contamination, characteristic moderate inflammatory changes in the general blood test, high predisposition of patients with diabetes to the development of tuberculosis.
4. Tuberculosis is asymptomatic.
5. Treatment in a hospital according to 1 chemotherapy regimen, since the patient had not previously suffered from tuberculosis, with correction after receiving data from drug sensitivity tests of MBT.

Task 48.

Patient V., 55 years old, an accountant by profession, was hospitalized in the pulmonology department due to complaints of progressive shortness of breath with difficulty inhaling, dry cough and aching pain at the angles of the shoulder blades, aggravated by deep breathing, general weakness, fatigue, low-grade fever. Considers himself sick for 8 months, when a dry cough, low-grade fever and weakness appeared.

The condition was assessed as an acute respiratory disease, aspirin, suprastin, and calcium gluconate were prescribed. The patient's health continued to deteriorate. Shortness of breath appeared and gradually began to increase. Then there was aching pain at the angles of the shoulder blades when taking a deep breath. During auscultation, the local therapist detected crepitating rales, on the basis of which pneumonia was suspected and therapy with ampicillin was prescribed at a dose of 2 g per day. Despite ongoing antibacterial therapy, the condition could not be stabilized. Weakness, sweating, and dry cough persisted, and the patient lost 5 kg in six months. Shortness of breath progressed steadily. The patient was referred for consultation to a tuberculosis dispensary, where the diagnosis of tuberculosis was ruled out. For examination and selection of therapy, the patient was sent to hospitalization in the pulmonology department.

Objectively: the condition is relatively satisfactory. A patient with low nutrition. The skin and visible mucous membranes are of normal color and clean. Heart rate – 96 per minute. Blood pressure 130/80 mm Hg. Art. The limits of relative and absolute cardiac dullness are within normal limits. Heart sounds are muffled, no murmurs are heard. NPV – 24 per 1 minute. Voice tremors are unchanged and symmetrical. Percussion tone is clear, pulmonary. Breathing is vesicular, weakened. Crepitating rales like “cellophane crackling” are heard from behind on both sides to the level of the lower 1/3 of the shoulder blades. The tongue is wet and pink.

The abdomen is soft and painless. The liver does not protrude from under the edge of the costal arch. Tapping on the lower back is painless on both sides.

Blood test results:erythrocytes - 4.2 x 1012/l, hemoglobin - 120 g/l, leukocytes – 6.4 x 109/l, eosinophils – 1%, basophils – 0%, band neutrophils – 3%, segmented neutrophils – 58%, lymphocytes – 35%, monocytes – 3%. ESR – 26 mm/hour. An x-ray of the chest organs in 2 projections reveals a widespread increase in the pulmonary pattern due to the interstitial component in the form of unclear contours of blood vessels, peribronchial-perivascular changes and fine cellularity. The greatest severity of changes can be seen in the lower zones of both lungs. The roots of the lungs are not expanded, structural. The diaphragm is located high (posterior sections of the 9th rib) and has clear, even contours. The cardiac shadow lies widely on the diaphragm with low arcs. Study of the function of external respiration: vital capacity of the lungs - 68% of the proper value, forced expiratory volume in one second - 80% of the proper value, Tiffno test - 75%.

Questions:

1. Formulate a preliminary diagnosis.

2. What lung pathologies should be considered for differential diagnosis?

3. Additional examination to clarify the diagnosis.

4.Name the main drugs for treating the disease, justify the prescription, explain the mechanism of action.

5. What method of surgical treatment is effective for this pathology. Under what circumstances may indications for such treatment arise in this case?

Sample answer:

1.Diagnosis: Idiopathic pulmonary fibrosis.

2. This disease should be differentiated from exogenous allergic alveolitis (hypersensitive pneumonitis), as well as pneumonia, granulomatosis, sarcoidosis, disseminated tuberculosis, bronchioloalveolar cancer, pneumoconiosis, diffuse amyloidosis.

3. Computed tomography of the lungs, histological examination of lung biopsy, pulse oximetry.

4. Drug therapy for idiopathic fibrosing alveolitis consists of prescribing to patients drugs with proven effectiveness, which include drugs with antifibrotic activity: nintedanib and pirfenidone. These drugs can stop the progression of the disease and possibly prolong the patient's life. Nintedanib (150 mg 1 tablet 2 times a day) is an intracellular inhibitor of tyrosine kinases acting on growth factor receptors of vascular endothelium, fibroblasts and platelets, which play an important role in the pathogenesis of idiopathic pulmonary fibrosis. Blockade of these receptors leads to the suppression of several profibrotic signaling cascades, including proliferation, migration and differentiation of fibroblasts, as well as the secretion of extracellular matrix components.

4. In case of ineffectiveness of drug treatment, progression of pulmonary fibrosis, and negative clinical dynamics, lung transplantation is indicated.

Task 49.

Patient 35 years old, farmer, workingwith hay, consulted a pulmonologist with complaints of a nonproductive cough, an increase in body temperature to 37.6°, and a feeling of lack of air during moderate physical activity.

Considers himself sick for three to four months; the disease began while working with hay. He repeatedly sought medical help and was treated for pneumonia with varying success. While the farmer stopped working and stayed in the hospital, his condition improved significantly, it was stated

recovery. Symptoms returned 1-2 weeks after returning to work. His life history is uneventful, he has not been in contact with infectious patients, he has not noted any allergic reactions or reactions to medications. Sometimes I suffered from mild ARVI, the last time was 1.5 years ago.

Objectively: general condition is relatively satisfactory. The skin is of normal color and clean. Lymph nodes accessible to palpation are not enlarged, painless. The musculoskeletal system is without pathology. The chest is of regular shape, symmetrical, and evenly participates in the act of breathing. During percussion, a moderate shortening of the percussion tone is noted in the lower and lateral sections on both sides, and a squeak is also detected on inspiration. Crepitating rales are also heard here. NPV
-19 in 1 minute. The boundaries of the heart are within normal limits. The heart sounds are rhythmic and clear, heart rate is 84 per minute. Body temperature is 37.2°. No pathology was detected from other organs and systems.

On the chest X-ray: diffuse enhancement of the pulmonary pattern with dissemination of structurally heterogeneous foci with unclear contours, mainly in the middle and lower sections.

Questions:

1. Name the leading syndrome identified in the patient.
2. Formulate the most likely diagnosis and justify it.
3. What diseases need to be differentiated?
4. What examination is necessary to confirm the diagnosis.
5. Therapeutic measures, drug therapy (drugschoice Vin this case).

Sample answer:

1.Syndrome of disseminated pathological process in the lungs.

2.Acute hypersensitivity pneumonitis (exogenous allergic alveolitis). The diagnosis was made on the basis of recurrent disseminated lung lesions, presumably arising from contact with hay, with a process duration of about 4 months.

3. Idiopathic fibrosing alveolitis, hypersensitivity pneumonitis (exogenous allergic alveolitis), tuberculosis, sarcoidosis, bronchioloalveolar cancer.

4. Determination of antibodies (IgG) to the presumed etiotropic antigen.

Spiral computed tomography of the lungs, pulse oximetry, spirometry.

5.Stopping contact with the suspected etiotropic allergen. The drugs of choice are glucocorticoids (prednisolone, etc.).

Task 50.

A 44-year-old woman is receiving treatment for systemic scleroderma, chronic course, activity II, limited cutaneous form with Raynaud's syndrome, sclerodactyly, dysphagia, pulmonary fibrosis, DN I, cor pulmonale with extrasystole.

On examination: the skin is uniformly hyperpigmented. The skin of the hands and fingers is cold, compacted, evenly thickened, not folded, and there are no wrinkles over the interphalangeal joints. The nail phalanges of all fingers are shortened. The muscles of the shoulder and pelvic girdle are atrophic, the forearms are compacted and rigid. The range of passive and active movements in the interphalangeal joints is sharply reduced. Breathing is shallow, 24 per minute. A decrease in lung excursion and a symmetrical weakening of vesicular respiration in the lower sections was revealed. Blood pressure - 110/70 mm Hg. Art. Heart sounds are irregular, 88 per minute, single extrasystoles; The first tone over the apex and base of the xiphoid process is weakened. The abdomen is soft, painless on both superficial and deep palpation.

Laboratory. General blood test: red blood cells - 3.1×1012/l, hemoglobin - 95 g/l, color index -0.85; leukocytes - 15.3×109/l; eosinophils – 2%, band neutrophils – 8%, segmented neutrophils – 72%, lymphocytes – 17%, monocytes – 1%; ESR - 27 mm/h. Biochemical blood test: total protein - 75 g/l; albumins - 40%, globulins - 60%, 1 - 3.8%, 2 - 12%; - 12%; – 32.2%; fibrinogen – 6.6 g/l; SRB (++). Repeated studies of LE cells in the blood are negative.

On spirometry, FVC decreased by 10% over time. ECG:

single ventricular extrasystoles.

X-ray of the chest organscells: “honeycomb” lung, phenomena of pneumosclerosis.On CTOG there are signs of honeycomb lung, reticular changes with predominant damage to the cortical and basal parts of the lungs. In dynamics There is an increase in fibrotic changes in the lungs.

Questions:

1. What type of interstitial pneumonia corresponds to the CT picture identified in the patient? Justify.
2. In what nosological form are the radiological changes identified in this case the main diagnostic sign? Why is it not possible to diagnose this disease in this case.
3. Determine the nature of the pathological process in the lungs. Justify.
4. Name a drug that can reliably stop or slow down the pathological process in the lungs in this case.

Sample answer:

1. CT changes correspond to UIP (usual interstitial pneumonia), since bilateral reticular changes and signs of honeycomb lung with a predominance of changes in the cortical and basal parts of the lungs were detected.

2.Idiopathic pulmonary fibrosis. In this case, the lung lesion developed as a manifestation of systemic scleroderma and, therefore, cannot be idiopathic.

3.The course is progressive, since according to the P-study, an increase in pulmonary fibrosis and a decrease in FVC by 10% are observed over time.

4 Nintendonib (or pirfenidone).

Task 51.

The patient, 42 years old, complains of shortness of breath during moderate physical activity, discomfort in the chest, unproductive cough in the morning with hemoptysis, pain in the joints of the hands, feet, knee joints of a migrating nature, swelling of the above joints, redness of the conjunctiva and pain in the eyeball area on the right, difficulty in nasal breathing, congestion in the right ear, severe general weakness, increased sweating, increased body temperature to 38 degrees.

From the anamnesis it is known: he considers himself sick for 6 months, when chest pain appeared in the subscapular areas. During the examination, a diagnosis of pulmonary tuberculosis was made, for which she was treated in a hospital. There was no improvement in the patient's condition during the therapy; a month later, an unproductive cough joined the listed symptoms. The control X-ray of the chest organs shows negative dynamics. After 2 months, the patient’s condition worsened, pain in the chest intensified, pain and swelling in the joints of the hands, feet, knee joints of a migrating nature began to bother her, fever, hemoptysis, nasal congestion, weakness, shortness of breath with slight exertion, change in the color of urine to “dirty” yellow." During the examination, negative results of bacterial cultures (including tuberculosis) of sputum were obtained. SCT of the OGK revealed multiple polymorphic focal formations with signs of destruction in some of them, areas of “frosted glass”, and

also the phenomenon of honeycomb lung and reticular changes, mainly in the middle and lower sections. The patient was hospitalized in the pulmonology department.

Upon admission, the consciousness is clear, the position is active, the range of active movements is limited due to the severity of the articular syndrome; skin: on the skin of the ankle joints there is a pinpoint rash of a hemorrhagic nature; percussion of the lungs: moderate dullness in the middle and lower parts; Auscultation of the lungs: breathing is carried out in all parts, with a hard tint, no wheezing; Auscultation of the heart: heart sounds are muffled, rhythmic, sinus tachycardia up to 90 beats per minute; genitourinary system: the symptom of effleurage is negative on both sides, there is no swelling, urination is free, the urine is cloudy; musculoskeletal system: synovitis of the left wrist joint, limited mobility in it.

Laboratory test results: general blood test - anemia, accelerated ESR, neutrophilia, lymphocytopenia (hemoglobin 97 g/l, red blood cells 3.46 x1012/l, leukocytes 6.94 x109/l, platelets 417 x109/l, hematocrit 28.8 %, ESR 60 mm/h,

eosinophils - 2.6%, basophils 0.2%, band 12%, lymphocytes 11.3%, monocytes 6.3%). In general urine analysis - proteinuria, leukocyturia, hematuria (incomplete transparency, relative density of urine 1.019, reaction 5.5, protein 1.05 g/l, leukocytes 8-10 per field of view, erythrocytes 30-40 per field of view). In the biochemical blood test - an increase in the level of creatinine and urea (total protein 69 g/l., albumin 36 g/l., AST 22 U/l, ALT 27 U/l., creatinine 160 µmol/l, urea 10.4 mmol /l). Tests for ANA and dDNA are negative, ANCA is positive. C-reactive protein 58.8 mg/l. Rheumatoid factor 24.9 IU/ml.

An ophthalmologist verified keratitis of the right eye.

An examination by an ENT doctor revealed a displacement of the nasal septum to the left, granulomatous formation of the nasal septum on the left, and persistent difficulty in nasal breathing.

Questions:

1.What disease most likely caused the disseminated process in the lungs.

2.Justify your assumption.

3.What makes it possible to differentiate this pathological process frompulmonary tuberculosis?

4.What additional studies are needed to confirm the diagnosis? 5. Prescribe treatment.

Sample answer:

1.Granulomatosis with polyangiitis (Wegener's). The following criteria allowed us to suspect this disease: the presence of a granuloma in the nasal cavity, changes in the lungs on X-ray, changes in urine.

2. Negative culture test for tuberculosis, lack of effect of anti-tuberculosis therapy, as well as the presence of symptoms of systemic vasculitis.

3.Goodpasture syndrome, microscopic polyangiitis, eosinophilic granulomatosis with polyangiitis (Churg-Strauss), cryoglobulinemic vasculitis, SLE.

4.Morphological examination of a pathological formation in the nose, lung biopsy, ultrasound of the abdominal organs. Consultation with a rheumatologist, nephrologist, kidney biopsy.

5. The standard treatment regimen includes the use of high doses of glucocorticosteroids (methylprednisolone or prednisolone, including pulse therapy) and cytostatics (cyclophosphamide, including pulse therapy). In most patients, prophylaxis against Pneumocystis jiroveci infection (co-trimoxazole) should be used. The genetically engineered anti-B cell therapy rituximab may also be used. In severe cases, plasmapheresis can be used. Treatment can be adjusted based on the results of a morphological study of the kidneys. During development

end-stage renal failure – renal replacement therapy. Doses of drugs are calculated individually.

Task 52.

Patient A., 42 years old, complains of shortness of breath with slight physical exertion, moderate cough with scanty mucous sputum, increased body temperature to 37.2°-37.5°. He fell ill 5 years ago.

According to the patient, he was examined in a pulmonology clinic, and a histological examination of a lung biopsy was carried out. He was treated for pulmonary sarcoidosis for 1 year (he cannot provide the documents, he may have lost it). As a result of treatment, remission of the disease occurred. Symptoms of the disease resumed 1 month ago for no apparent reason, increasing gradually. Sometimes he suffered from acute respiratory viral infections. Denies other diseases. Heredity is not burdened. The epidemiological anamnesis is favorable.

Upon objective examination, the general condition is relatively satisfactory. The skin is of normal color and clean. Lymph nodes accessible to palpation are not enlarged, painless. The musculoskeletal system is without features. The chest is of regular shape and evenly participates in the act of breathing. The percussion tone in the subscapular areas on both sides is moderately shortened, here moderate crepitus is determined, breathing is harsh, respiratory rate is 24 per minute. Heart sounds are muffled and rhythmic. Heart rate - 96 per minute, blood pressure - 130/80 mm Hg. The abdomen is soft and painless. The liver is at the edge of the costal arch, elastic, painless, the spleen is not palpable. The kidneys are not palpable, the effleurage symptom is negative on both sides. Diuresis and stool are normal.

Complete blood count: no pathology detected.

General urine analysis without pathology.

General analysis of sputum: mucous character, single leukocytes, mycobacterium tuberculosis were not detected.

Bronchoscopy revealed moderate catarrhal endobronchitis. On the chest x-ray: the roots of the lungs are without features. There is diffuse enhancement and deformation of the pulmonary pattern, dissemination of polymorphic foci mainly in the middle and lower sections on both sides. Tuberculin tests are negative.

Questions:

1. Formulate a preliminary diagnosis and justify it.
2. What examination needs to be carried out?
3. Name the main drugs for the treatment of this disease and indicate the method of their use.

Sample answer:

1) Preliminary diagnosis: pulmonary sarcoidosis stage III, active (Ist stage), relapse, progressive course. Respiratory failure stage II. The diagnosis was made based on medical history (previously treated for morphologically confirmed sarcoidosis, NPV-24 in 1 minute at rest, pronounced diffuse focal-interstitial changes on the X-ray of the chest in the absence of signs of enlarged lymph nodes in the roots of the lungs. Consultation with a phthisiatrician.

2) Additional examination is recommended: spiral computed tomography of the chest, histological examination of a lung biopsy, pulse oximetry. spirometry, ECG, EchoCG, ultrasound of the abdominal cavity and retroperitoneal space, general blood test, general urinalysis, calciuria, blood test for creatinine, urea nitrogen, calcium, ACE, CRP, determination of glomerular filtration rate, immunogobulins A, M, G in blood serum.

3) The main drugs for the treatment of this disease are glucocorticoids. Treatment with prednisolone (or an equivalent dose of another glucocorticosteroid) is prescribed daily in the morning per os at an initial dose of 25-30 mg per day for 4 weeks, then the dose is reduced by 5 mg per month in steps to a maintenance dose of 10 mg to control symptoms and progression of the disease and continues 12-24 months. After 3 months from the start of treatment, it is necessary to evaluate the effect of the glucocorticoid.

Task 53.

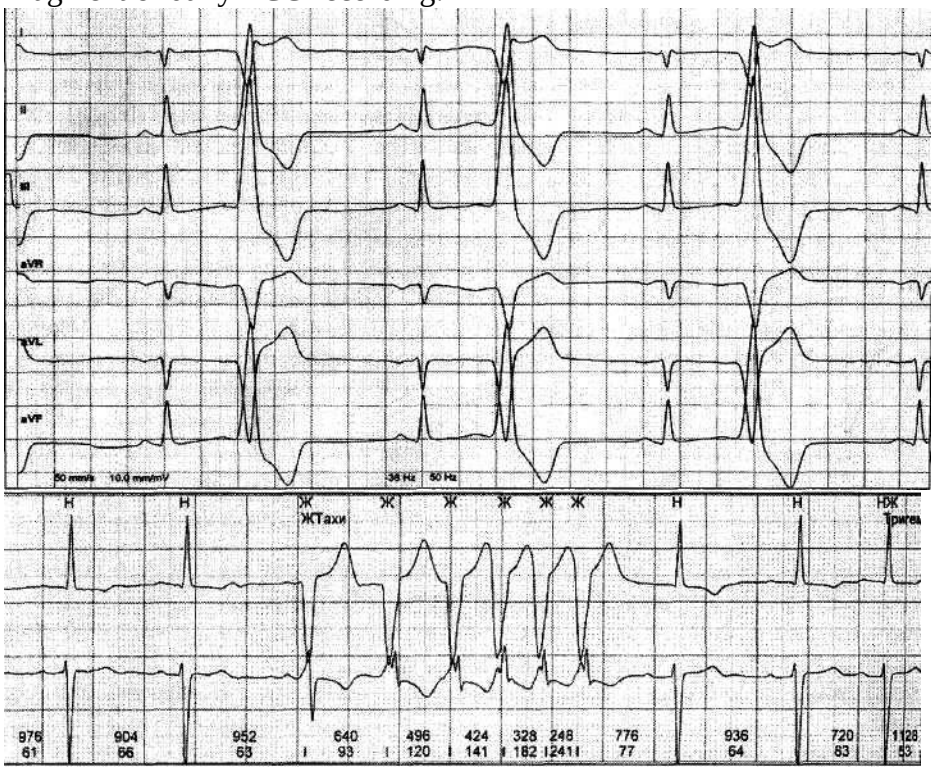
Patient F., 22 years old, came to the clinic with complaints of darkening of the eyes, dizziness, and short-term loss of consciousness when performing physical activity. From the anamnesis it is known that for two years he has been observed by a cardiologist with a diagnosis of

"hypertrophic cardiomyopathy", did not receive constant therapy. Over the past few months, my health has worsened, and attacks of dizziness and loss of consciousness have become more frequent.

The family history is burdened: the patient's uncle died suddenly at the age of 32 years. Not smokes

On examination, the skin and visible mucous membranes are of normal color. NPV – 18 in 1 min. With comparative percussion, the sound is clear and light. Auscultation of the lungs: vesicular breathing, no wheezing. The apical impulse is determined in the 5th intercostal space 1 cm outward from the midclavicular line. The boundaries of relative dullness of the heart: right 1 cm to the right from the right edge of the sternum, left 1 cm outward from the midclavicular line in the 5th intercostal space, upper at the level of the upper edge of the 3rd rib. On auscultation of the heart, the sounds are sonorous and arrhythmic. Pulse – 72 beats per minute, satisfactory filling and tension, blood pressure – 120/80 mm. rt. Art. on both hands. The abdomen is soft and painless. The lower edge of the liver is soft and painless. The spleen is not enlarged. General blood and urine analysis without pathology.

The patient underwent 48-hour ECG monitoring, which revealed cardiac arrhythmias. Fragment of daily ECG recording:



Echocardiography revealedsymmetrical hypertrophy of the left ventricle (the thickness of the posterior wall of the left ventricle is 1.6 cm, the thickness of the interventricular septum is 1.7 cm), there are no signs of obstruction of the outflow tract of the left ventricle.

Questions.

1. What rhythm disorder does the patient have?
2. Explain the reason for the patient's fainting.
3. What recommendations can be given for

treatment? Sample answer:

1. Ventricular bigeminy, paroxysm of ventricular tachycardia (6 complexes).
2. The patient's fainting occurs, apparently, as a result of changes in hemodynamics with the appearance of paroxysms of ventricular tachycardia.
3. The presence of ventricular cardiac arrhythmias against the background of hypertrophic cardiomyopathy in a patient indicates a high risk of sudden cardiac death; the most optimal treatment method is the installation of an implantable cardioverter-defibrillator.

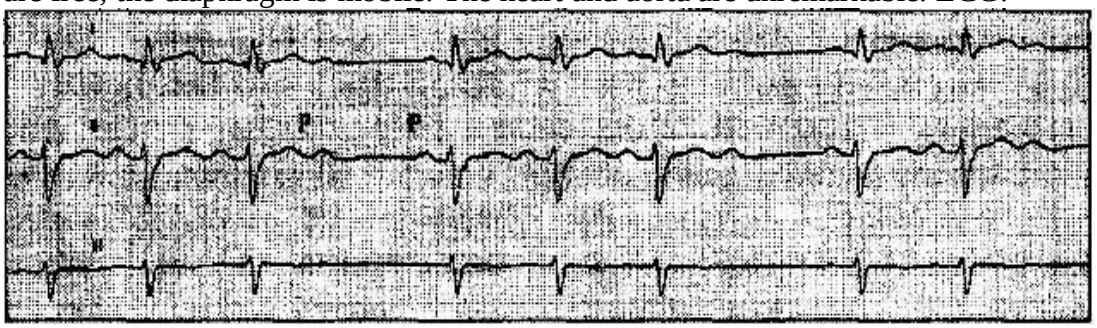
Task 54.

Patient K., 19 years old, student, for two weeks after suffering from an acute respiratory viral infection, which occurred with an increase in temperature to 38 ° C, noticed excessive fatigue, weakness, palpitations and interruptions in the work of the heart, stabbing pain in the heart area, lasting several seconds , arising and passing spontaneously, shortness of breath during moderate physical activity - climbing the stairs to the first floor.

On examination: the patient has an asthenic build. The skin is pale, joint hypermobility. Lymph nodes are not enlarged. Temperature – 36.7 °C. In the lungs, breathing is vesicular, carried out in all parts, wheezing is not heard. NPV –
16 per minute. The apical impulse is weakened and localized in the 5th intercostal space. When percussion determines the boundaries of relative cardiac dullness: left - along the 1. Media clavicularis sinistra, upper - along the 2nd intercostal space, right - 4 cm outward from the right edge of the sternum. On auscultation of the heart: the tones are muffled, arrhythmic, a soft systolic murmur without conduction is heard at the apex. Heart rate – 52 beats per minute. HELL – 110/70 mm Hg. Art. The abdomen is soft and painless. The soft elastic edge of the liver is palpated under the edge of the costal arch. The dimensions of the liver according to Kurlov are 9x8x7 cm. The thyroid gland is not enlarged. Neurological status – without features.
Complete blood count: hemoglobin – 130 g/l, erythrocytes – 4.5 x 1012/l, leukocytes – 8.2 x 109/l, eosinophils – 2%, band cells – 7%, segmented cells – 60%, monocytes – 15% , lymphocytes – 16%, ESR – 20 mm/h.

Biochemical blood test: total protein - 74 g/l, creatinine - 78 µmol/l, urea - 5.2 mmol/l, ALT - 24 U/l, AST - 30 U/l, total bilirubin - 12 µmol/l, direct – 3.0 µmol/l, K+ – 4.6 mmol/l, Na+ – 138 mmol/l. General urine analysis: no features.

X-ray of the chest organs: the lung fields are transparent. Roots are structural. The sinuses are free, the diaphragm is mobile. The heart and aorta are unremarkable. ECG:



The clinic doctor diagnosed myocarditis and prescribed treatment. Questions:

1.What rhythm disorder was detected in the patient?

2.Describe the ECG criteria for this cardiac arrhythmia.

3.Describe the patient management tactics regarding cardiac arrhythmias.

Sample answer:

1. Second degree AV block, Mobitz type II.

2. ECG signs of second degree AV block, Mobitz type II: loss of the QRS complex with a normal or steadily increased duration of the P-R(Q) interval in the ratio 2:1, 3:1, 4:1, etc.

3. Discontinuation of medications with negative chronotropic effects. If third degree AV block occurs, implantation of an artificial pacemaker is indicated.

Task 55.

Patient F., 83 years old, was hospitalized in the clinic with complaints of attacks of short-term loss of consciousness, which occur for no apparent reason, last, according to relatives, 10-20 seconds, and go away on their own.

From the anamnesis it is known that over the past three years he has been suffering from coronary artery disease; during everyday physical activity, a feeling of heaviness in the chest and shortness of breath appear. Over the past year, cognitive disorders have progressed rapidly, and memory has significantly decreased. The real deterioration occurred during the last month, when short-term loss of consciousness began to appear, which was accompanied by a decrease in heart rate to 20 beats per minute.

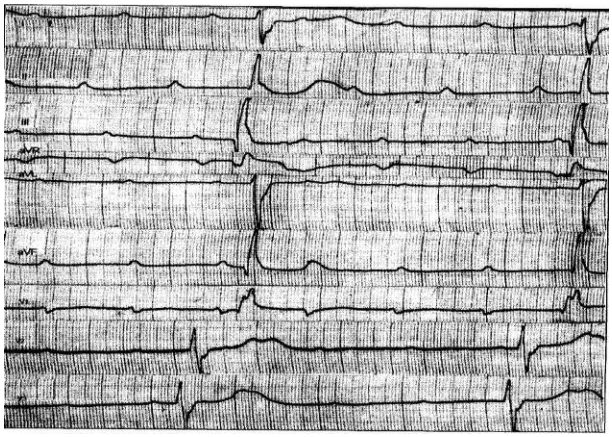
Upon examination, the condition is serious, pronounced cyanosis of the lips, acrocyanosis, pallor of the skin. The hands are cold on palpation. The shape of the chest is funnel-shaped, breathing is free, respiratory rate is 17 beats per minute. On percussion, the sound is clear, pulmonary, the boundaries of the lungs are within normal limits. On auscultation, breathing is harsh, weakened in the lower parts, and there is no wheezing. The boundaries of relative cardiac dullness: right - the right edge of the sternum, left - along the left midclavicular line, upper - the upper edge of the third rib. On auscultation, heart sounds are muffled, rhythmic, with an accent of the second tone over the aorta. Heart rate – 48 beats per minute. Peripheral vascular pulsation is reduced. Blood pressure – 160/90 mm Hg. Art. The abdomen is soft and painless. The liver is at the edge of the costal arch, dimensions according to Kurlov are 10x9x8 cm. The kidneys are not palpable. Pasternatsky's symptom is negative on both sides.

General blood test: red blood cells - 4.5x1012/l, hemoglobin - 136 g/l, leukocytes - 6.2x109/l, platelets - 209x109/l, ESR - 10 mm/h.

General urine analysis: specific gravity – 1010, acidic reaction, complete transparency, yellow color. Protein, no glucose. There are no cylinders. Leukocytes – 0-1 in the field of view, erythrocytes – 10-11 in the field of view.

Biochemical blood test: total protein – 80 g/l, total bilirubin – 17 µmol/l, creatinine – 81 µmol/l, glucose – 5.6 mmol/l, cholesterol – 7.1 mmol/l, triglycerides – 3.8 mmol/l, K+ - 4.2 mmol/l, Na+ - 135 mmol/l, AST - 21 U/l, ALT - 20 U/l.

During an objective examination, the patient lost consciousness, against which an ECG was taken, which is presented below:



Questions:

1. Explain the episodes of loss of consciousness in the patient?
2. Describe the mechanism of development of fainting in the patient.
3. What cardiac arrhythmia did the patient experience?
4. Give recommendations for treating the patient.

Sample answer:

1. The loss of consciousness in the patient can be explained by a conduction disorder - AV block of the third degree, which is manifested by attacks of loss of consciousness with the rapid development of severe cerebral ischemia due to a significant decrease in cardiac output in patients with cardiac arrhythmias.

2. The patient has Morgagni-Adams-Stokes syndrome. This syndrome occurs due to the sudden cessation of effective cardiac activity due to asystole, flutter and ventricular fibrillation. Severe cerebral ischemia occurs when cardiac output decreases below two liters per minute due to cardiac arrhythmias. Depending on the type of cardiac arrhythmia, three pathogenetic forms of Morgagni-Adams-Stokes are distinguished: bradycardic, tachyarrhythmic and mixed forms.

3. During loss of consciousness, the patient had third degree AV block.

4. Implantation of an artificial pacemaker is recommended.

Task 56.

Patient R., 28 years old, student, was hospitalized in the cardiology hospital. Complaints of shortness of breath when walking up to 100 m, increased shortness of breath in a horizontal position, palpitations, general weakness, swelling in the legs. Within 2 months he notes the appearance of shortness of breath and weakness. A week ago, interruptions in the work of the heart and palpitations appeared, and from that time swelling appeared in the legs.

Past illnesses include acute respiratory infections, appendectomy in childhood, and influenza about 4 years ago.

Objectively: the general condition is serious. The skin is pale. Swelling of the legs, feet. Peripheral lymph nodes are not enlarged. Dullness of percussion sound in the lower parts of the lungs. Breathing is vesicular, crepitating rales in the lower parts, respiratory rate is 26 per minute. Apical impulse in the VI intercostal space 3 cm outward from the left midclavicular line. Borders of relative dullness of the heart: right - 2 cm outward from the right edge of the sternum, upper - 2nd intercostal space along the left midclavicular line, left
- along the anterior axillary line. Heart sounds are muffled, systolic murmur at the apex and at the V point of auscultation. The heart rhythm is abnormal, heart rate is 122 beats per minute, blood pressure is 100/80 mm Hg. Art., average pulse - 105 per minute, irregular. The dimensions of the liver according to Kurlov are 14×11×10 cm.

General blood test: hemoglobin - 125 g/l, leukocytes - 4.0×109/l, ESR - 10 mm/h. Chest x-ray revealed signs of cardiomegaly.

EchoCG: dilatation of the left and right ventricles, diffuse hypokinesis, ejection fraction - 28%.

ECG: atrial fibrillation, heart rate - 132 per minute.

Questions:

1. Guess the most likely diagnosis.
2. What changes in the myocardium are revealed by histological examination in this disease?
3. List the ECG signs of atrial fibrillation.
4. Prescribe treatment for this patient.
5. Does the patient need to restore sinus rhythm?

Sample answer:

1. Dilated cardiomyopathy. Rhythm disturbances such as permanent atrial fibrillation, tachysystole. CHF IIB stage. III FC.
2. Histological examination reveals nonspecific changes: degeneration and necrosis of cardiomyocytes, infiltration of the myocardium with mononuclear cells, areas of fibrosis.
3. Absence of the P wave, RR intervals of varying duration, narrow QRS complexes, presence of fibrillation waves f.
4. ACE inhibitor (enalapril, ramipril, fosinopril) or sacubitril/valsartan (Uperio), if sartana is intolerant.

Beta blockers (bisoprolol, metoprolol, carvedilol) AMKR
(spironolactone, eplerenone)
NGLT-2 (dapashliflozin or empagliflozin)
Diuretic (in this case, torsemide would be the most optimal)
Anticoagulants (DOACs (rivaroxaban, apixaban, dabigatran)

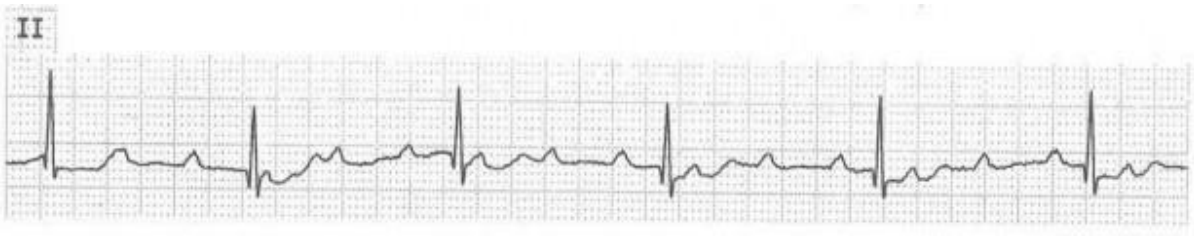
5. Taking into account the data of the echocardiography study (a significant decrease in left ventricular ejection fraction and dilatation of the left chambers of the heart, primarily the left atrium), the patient does not need to restore the heart rhythm; it is necessary to control the heart rate and carry out anticoagulant therapy.

Task 57.

A 78-year-old patient, at an appointment with a local general practitioner, complains of attacks of dizziness, sometimes with short-term loss of consciousness, which have become more frequent over the past month. In addition, there is shortness of breath with little physical exertion and swelling in the legs, which also appeared about a month ago and subsequently intensified. History: he considers himself sick for about 10 years, when for the first time a compressive pain in the heart area and shortness of breath when walking up to 200 m appeared, the pain was effectively relieved by Nitroglycerin. A year ago, for the first time, an attack of loss of consciousness occurred for several minutes, accompanied by involuntary urination. In the last month, similar attacks have become more frequent, and blood pressure has increased.

Objectively: consciousness is clear. Severe cyanosis of the lips, the border of relative cardiac dullness of the heart is shifted to the left by 2 cm. Heart sounds are muffled, rhythmic. At times, a loud (cannon-like) 1st tone is heard. Heart rate -34 beats per minute. Blood pressure - 180/100 mm Hg. Art. There is hard breathing in the lungs, no wheezing. The liver protrudes from under the costal arch by 5 cm, its edge is dense, sensitive to palpation. Symmetrical swelling on the legs up to the upper third of the legs.

Presented ECG (speed 25 mm/s):



Questions:

1. Guess the most likely diagnosis.
2. Name the deviations from the norm visible on the presented ECG, Andformulate an ECG conclusion.
3. What syndrome is leading in the clinical picture of this disease?
4. Among what similar conditions is differential diagnosis required?
5. What method of treating this emergency condition, manifested by fainting, is the most effective?

Sample answer:

1. IBS. Angina pectoris, FC II. Complete atrioventricular block (AV block 3rd degree). Morgagni-Adams-Stokes attacks. Stage III arterial hypertension, uncontrolled, risk 4.
2. Complete atrioventricular block, escape rhythm of the AV junction. Conclusion: complete atrioventricular block (III degree).
3. Conduction disturbance: complete atrioventricular block with Morgagni-Adams-Stokes attacks.
4. Syncope with sick sinus syndrome, with paroxysmal tachycardia, with transient ischemic attacks, with epilepsy.
5. Temporary cardiac pacing.

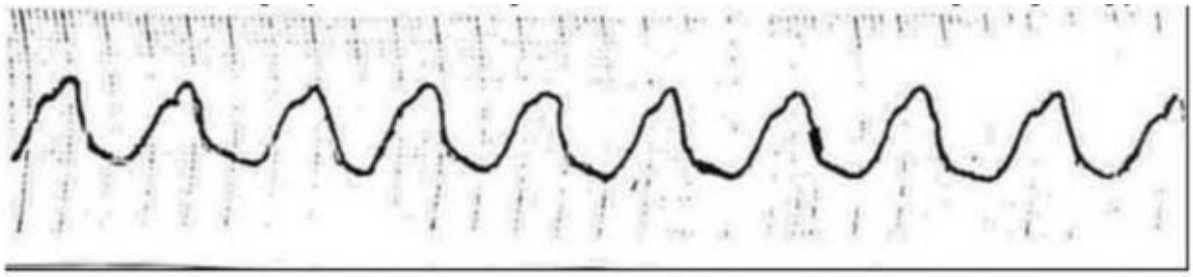
Task 58.

An emergency doctor was called to a 71-year-old patient. Complaints of shortness of breath, weakness, dizziness and rapid heartbeat for 15 minutes. Medical history: suffered a myocardial infarction of the posterior inferior wall of the left ventricle in 2012, was treated as an inpatient. Suffering from hypertension with blood pressure readings of 180/90 mm Hg. Art. within 10 years. With little physical activity (walking 200 meterscalmly) there are chest pains that are relieved by taking

Nitroglycerin. The attacks have not become more frequent over the past six months. Notes swelling of the legs, more in the evening. She periodically takes Cardipin XL, Furosemide, Digoxin. Objectively: the condition is of moderate severity. Conscious. Lies with a high headboard. The skin is pale and moist. Acrocyanosis. Pulse -120 per minute, weak filling, rhythmic. Blood pressure -90/60 mm Hg. Art. The boundaries of relative cardiac dullness on the left in the V intercostal space from lin.medioclavicularis sin. + 2 cm. Heart sounds are muffled, the first sound at the apex is weakened. The emphasis of the second tone is on the pulmonary artery. Respiratory rate -26 per minute. There is hard breathing in the lungs, small moist rales in the lower sections. Liver + 5 cm below the costal arch. Swelling of the legs.

An ECG taken immediately after examination of the patient in order to assess the nature of the disorders

rhythm:



Questions:

1. Give a description of the changes in the electrocardiogram.
2. Your presumptive diagnosis.
3. Provide a rationale for your presumptive diagnosis.
4. Draw up and justify a plan for additional examination of the patient.
5. Treatment tactics, choice of drugs.

Sample answer:

1. The ECG recorded a continuous "sinusoidal" paroxysmal ventricular tachycardia - these are sinusoidal ventricular complexes with a frequency of 120-180 per minute, reminiscent of ventricular flutter (in the patient - with a frequency of 180 per minute). This ventricular tachycardia occurs mainly in patients with severe damage to the left ventricle. Considering the duration of the paroxysm, the patient
-stable form.

2. Cardiac ischemia. Angina pectoris III functional class. Post-infarction cardiosclerosis. Stage III hypertension. Paroxysm of ventricular tachycardia, stable form. Arrhythmic shock stage I. CHF stage IIB, functional class IV. CV risk 4

3. A patient with a documented history of myocardial infarction has clinical manifestations of exertional angina of functional class III. Complaints at the time of presentation were associated with a persistent paroxysm of ventricular tachycardia, which was complicated by arrhythmic shock. Intoxication with cardiac glycosides cannot be excluded, since the sinusoidal form of ventricular tachycardia is characteristic of an overdose of cardiac glycosides. There are manifestations of biventricular heart failure at rest, which is typical for CHF stage IIB, functional class IV. The patient has hypertension, stage 3 hypertension, stage III, CV risk 4, taking into account the presence of an associated clinical condition - coronary heart disease.

4. After stopping the paroxysm of ventricular tachycardia, the patient is recommended: daily ECG monitoring, daily blood pressure monitoring to assess the stability of the increase in blood pressure, the daily blood pressure profile; conducting an ECG; conducting echocardiography to assess the size of the heart cavities and the presence of blood clots, assessing the thickness of the myocardial walls, diastolic and systolic function; consultation with an ophthalmologist and ophthalmoscopy to assess the presence of hypertensive ophthalmopathy; Ultrasound examination of the kidneys to assess kidney target organ damage. Coronary angiography. Laboratory studies: assessment of markers of myocardial damage, blood electrolyte composition, creatinine, glomerular filtration, lipid spectrum, daily fluctuations in blood glucose.

5. The patient has a life-threatening rhythm disorder, a stable form of paroxysmal ventricular tachycardia, complicated by arrhythmic shock. Emergency electrocardioversion is indicated. The patient should be hospitalized in the intensive care unit. The abolition of cardiac glycosides is indicated. To improve the prognosis of life in patients who have suffered an MI and have potentially malignant VAs, it is indicated

prescribing b-blockers without their own sympathomimetic activity and amiodarone. Resolution of the issue of implantation of a cardioverter-defibrillator.

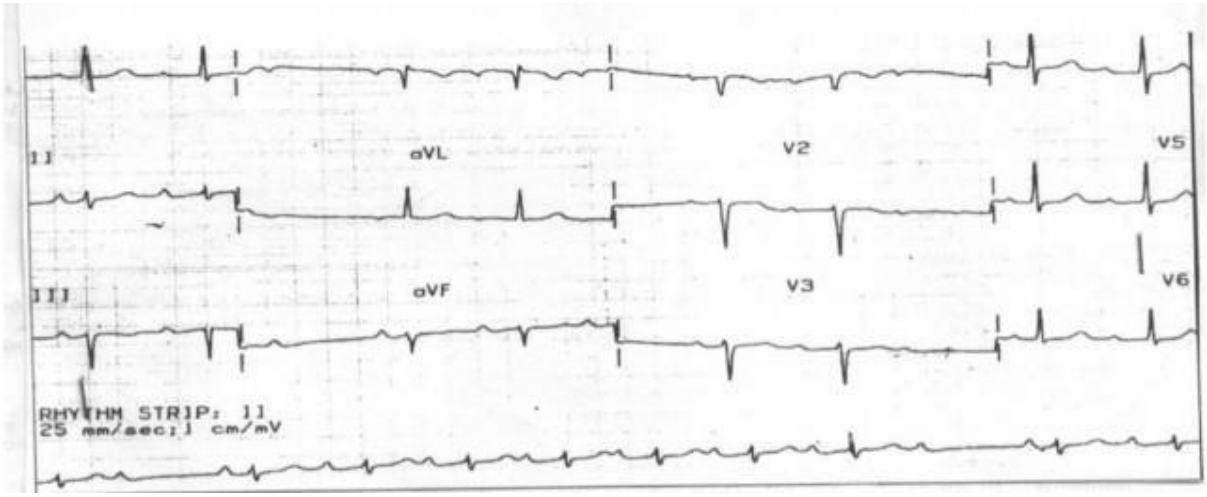
Task 59.

A 67-year-old patient, a pensioner, was admitted to the clinic with complaints of a rare pulse, interruptions in the work of the heart, a feeling of fading and stopping, a feeling of lack of air when climbing 1 flight of stairs, pressing pain in the chest during normal physical activity, relieved by taking Nitroglycerin after 1 -2 minutes; short-term episodes of loss of consciousness.

From the anamnesis: four years ago he suffered a myocardial infarction. A year later, anginal pain began to appear during normal physical activity. A week ago, I felt interruptions in my heart function, inspiratory shortness of breath, and noted short-term episodes of loss of consciousness, which was the reason for hospitalization.

Objectively: the condition is of moderate severity, acrocyanosis, no edema. In the lower parts of the lungs there is a small amount of silent, fine rales. Heart sounds are muffled, arrhythmic, heart rate -42 beats per minute, Ps -42 per minute. Blood pressure -110/65 mm Hg. Art. The abdomen is soft and painless. The liver is 2 cm below the costal arch, its edge is smooth, rounded, slightly painful on palpation.

ECG recorded:



Questions:

1. Select the syndromes, determine the leading one.
2. Interpret the presented electrocardiogram.
3. Formulate a diagnosis.
4. Make a plan for additional examinations.
5. Prescribe treatment.

Sample answer:

1. Syndromes: rhythm and conduction disorders, coronary insufficiency, chronic left ventricular failure. The leading one is rhythm and conduction disturbance syndrome.

2. Sinus rhythm, atrioventricular block II degree, Mobitz I (with Samoilov-Wenckebach periodicity).

3. IHD: angina pectoris FC II. Post-infarction cardiosclerosis. Atrioventricular block II degree, Mobitz type I. CHF II A, FC III.

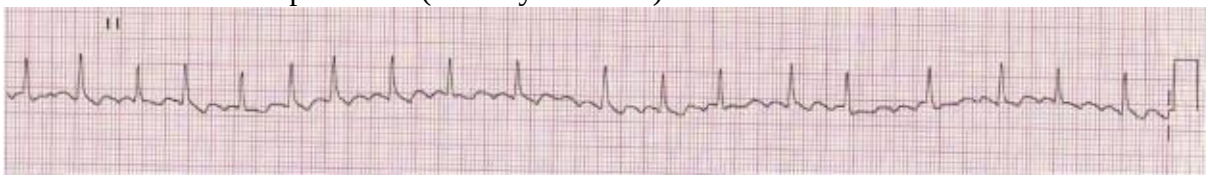
4. General blood analysis,general urine test, biochemical blood test (troponin T or I, glucose, creatinine with calculation of GFR, K, Na), dynamic ECG, coronary angiography, echocardiography, chest radiography.

5. Implantation of pacemaker is indicated. Taking into account the results of coronary angiography, determine the indications for myocardial revascularization (PCI and/or coronary bypass surgery). Drug therapy: ACE inhibitor (enalapril, ramipril, fosinopril) or sacubitril/valsartan (Uperio), if sartana is intolerant; AMKR (spironolactone, eplerenone); SGLT-2 (dapagliflozin or empagliflozin); Statins (rosuvastatin, atorvastatin); Antiplatelet agents (acetylsalicylic acid, clopidogrel).

Task 60.

Patient K., 50 years old, consulted a local general practitioner due to a first-time attack of palpitations, accompanied by muscle tremors, weakness, and slight difficulty breathing. The attack occurred about 2 hours ago under severe emotional stress. Previously, during regular medical examinations, no diseases were detected; blood pressure was always within normal limits. Previously taken ECGs showed no pathological changes. He tolerates very significant physical activity well. On examination: consciousness is clear. The skin is of normal color and moisture. In the lungs there is vesicular breathing, respiratory rate -18 per minute. The limits of relative cardiac dullness are within normal limits. Heart sounds are arrhythmic, no murmurs, heart rate -144 beats per minute, pulse -
108 per minute. Blood pressure -130/80 mm Hg. Art. The liver is not enlarged. There is no peripheral edema. Body temperature 36.9°C.

ECG lead II is presented (velocity 25 mm/s):



Questions:

1. Guess the most likely diagnosis.
2. Name the deviations from the norm visible on the presented ECG, Andformulate an ECG conclusion.
3. What syndrome is leading in the clinical picture of this disease?
4. Among what similar conditions is differential diagnosis required?
5. What medications should be used to treat this emergency condition?

Sample answer:

1. Idiopathic paroxysmal atrial fibrillation, tachysystolic form, hemodynamically insignificant paroxysm.

2. The rhythm is irregular (different RR), P waves and f waves are absent. Conclusion: atrial fibrillation, tachysystolic form.

3. Heart rhythm disturbances.

4. Other paroxysmal tachycardias with “narrow” QRS complexes (atrial flutter, atrial tachycardia, atrioventricular tachycardia), sinus tachycardia.

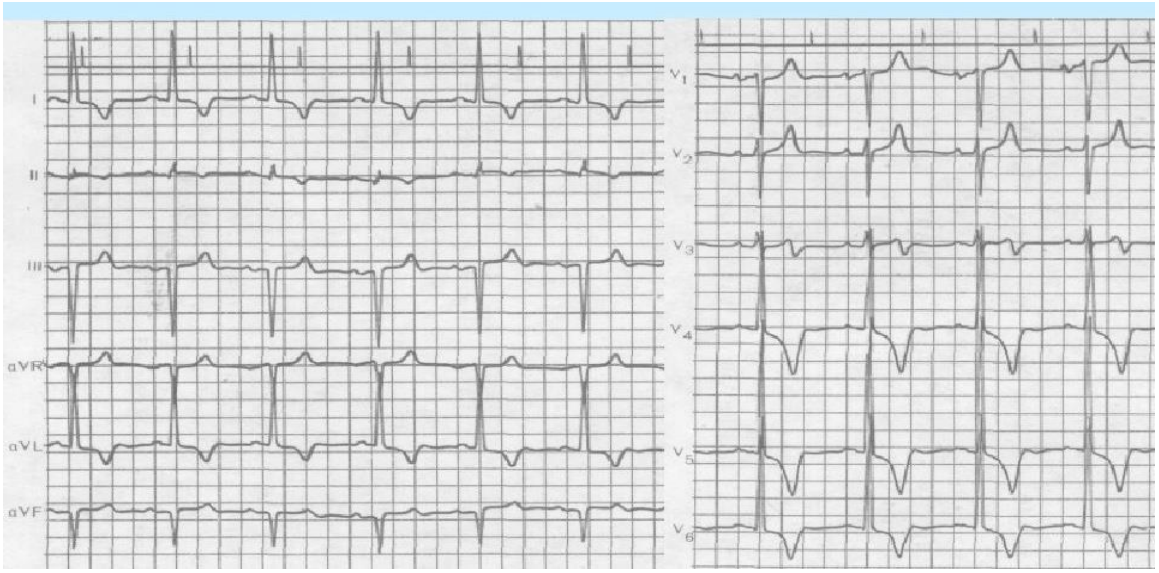
5. Novocainamide 1000 mg intravenous drip or Amiodarone 300 mg intravenous drip or Propafenone 450-600 mg orally (if the patient previously took this drug under medical supervision).

Task 61.

A 32-year-old patient was seen by a local general practitioner with complaints of periodic pressing retrosternal pain during moderate physical activity, interruptions in heart function and periodic loss of consciousness, which appeared about six months ago. The patient's brother died suddenly at a young age.

On examination, the skin is without any features, respiratory rate is 19 per minute, heart rate is 88 beats per minute, the rhythm is incorrect. Auscultation of the heart reveals a systolic murmur in the 3rd–4th intercostal space on the left. Blood pressure – 115/75 mm Hg. Art. The liver is not enlarged. There is no swelling.

ECG:



Daily ECG monitoring revealed frequent ventricular extrasystole and short paroxysms of ventricular tachycardia.

With echocardiography, the thickness of the interventricular septum in diastole is 1.7 cm, the posterior wall of the left ventricle is 1.3 cm, the size of the cavity of the left ventricle in diastole is 4.2 cm. He was hospitalized for examination and clarification of the diagnosis.

Questions:

1. Give the most likely diagnosis.
2. What research methods are needed in this case?
3. What treatment should be prescribed to this patient?
4. What diseases should be differentially diagnosed?
5. What symptoms are mandatory for this disease?

Sample answer:

1. Hypertrophic cardiomyopathy, idiopathic hypertrophic subaortic stenosis. Progressive course. Frequent ventricular extrasystole.

2. General blood and urine analysis. Biochemical blood test: total protein, protein fractions, creatinine, fibrinogen, C-reactive protein, troponin I, brain natriuretic peptide. X-ray examination of the lungs. ECG. Echocardiography with Dopplerography (with clarification of the presence of obstruction of the outflow tract of the left ventricle). Genetic test to identify a mutation associated with hereditary hypertrophic cardiomyopathy (including in first-degree relatives)

3. Cordarone, beta blockers. ICD according to indications. Surgical treatment (transaortic septal myectomy).

4. IHD, myocardial infarction. Hypertonic disease. Amyloidosis of the heart. Fabry disease. Restrictive cardiomyopathy. Aortic stenosis.

5. The hereditary concept (illness or sudden death of close relatives) is generally accepted. Anginal pain. Systolic murmur in the III-IV intercostal spaces to the left of the sternum. Systolic murmur of mitral valve prolapse. Rhythm disturbances (AF,

ventricular extrasystoles, ventricular paroxysmal tachycardia). Syncope. Abnormalities of diastolic function on echocardiography.

Task 62.

Patient K., 20 years old, was admitted to the therapeutic department with complaints of headache, increased body temperature to 38.8 °C, hemorrhagic rashes on the legs, thighs, buttocks, swelling of the knee and ankle joints, pain on movement.

From the medical history it is known that 3 weeks ago he suffered from acute respiratory viral infection and was treated independently with doxycycline and aspirin. While taking medications, a small-spotted rash appeared on the skin of the legs, swelling of the knee joints, and pain in them when moving. A general practitioner called from the clinic assessed the symptoms as an allergic reaction to drug therapy. The patient was advised to stop taking anti-inflammatory drugs. Antihistamines were prescribed.

After 2-3 days, the rashes and swelling of the joints disappeared, and the arthralgia stopped.

A week ago, due to rhinitis and low-grade fever (37.2 °C), the patient independently resumed taking aspirin. However, the condition worsened: the body temperature increased to 38.8°C, hemorrhagic rashes appeared on the lower extremities, thighs, buttocks, swelling and pain in the knee and ankle joints when moving, the headache and weakness intensified.

Two days after hospitalization, cramping abdominal pain, nausea, repeated vomiting, and bloody diarrhea suddenly appeared.

Objectively: the patient's condition is serious, body temperature is 38 °C. The skin is pale and dry. There are hemorrhagic rashes on the skin of the extensor surfaces of the feet, legs, and thighs, sometimes confluent in nature.

The knee and ankle joints are enlarged and movements in them are painful. Acute cramping pain in the abdomen every 5-7 minutes, during which the patient rushes about and groans.

In the lungs, breathing is vesicular, respiratory rate is 20 per minute. The boundaries of the heart are within normal limits, the sounds are muffled, tachycardia is 100 per minute, the rhythm is correct, blood pressure is 100/60 mm Hg. The tongue is dry, covered with a white coating. The abdomen is painful on superficial palpation, there are no symptoms of peritoneal irritation. Stools up to 15 times a day mixed with blood, almost without feces; repeated vomit the color of "coffee grounds."

Data from laboratory research methods.

Clinical blood test: Hb - 90 g/l, leukocytes - 12.6x109/l, band leukocytes - 12%, ESR - 34 mm/h, platelets - 180x109/l.

Clinical urine analysis: relative density - 1015, protein - 0.33 mg/l, red blood cells - 0-1 in the field of view. VSK is the norm. APTT is normal. VK is the norm.

Questions:

1. Formulate a preliminary diagnosis.
2. Determine the type of bleeding in this patient.
3. What provoking factors could the patient have?
4. Which group of drugs is indicated in this situation?

Sample answer:

1. Hemorrhagic vasculitis with damage to the skin (purpura), joints (arthritis of the knee and ankle joints), and gastrointestinal tract (ischemic enteritis complicated by gastrointestinal bleeding).
2. Vasculitic purpuric type of bleeding.
3. History of acute respiratory viral infection, taking antibiotics and aspirin.
4. For adults, symptomatic therapy and glucocorticosteroids with or without immunosuppressants are first prescribed. In this clinical case

The cause of vasculitis was taking doxycycline. The drug must be discontinued. Treatment is mainly symptomatic. In adults, corticosteroids (eg, prednisone 2 mg/kg or up to 50 mg orally once daily) can control abdominal pain and are sometimes required for severe joint pain or kidney damage. For severe kidney damage, pulse therapy with intravenous methylprednisolone can be used followed by oral prednisolone and immunosuppressants (mycophenolate mofetil, azathioprine, rituximab or cyclophosphamide). However, the effect of glucocorticosteroids on renal symptoms is not fully understood.

Task 63.

55-year-old patient M., a nurse, became acutely ill 7 days ago, when complaints of fever up to 38 °C, rhinorrhea and severe weakness appeared. She treated ARVI on her own, with little effect, but after 6 days a rash appeared on the skin of her legs, thighs and buttocks, and therefore she consulted a general practitioner. Objectively: symmetrical hemorrhagic rashes on the skin of the legs, thighs and buttocks, rising above the skin and not disappearing with pressure. Enlarged liver and spleen. Heart rate - 100 per minute, systolic murmur at the apex. In the blood: Hb - 90 g/l, erythrocytes - 3x1012/l, leukocytes - 12x109/l, eosinophils - 2%, band - 10%, segmented - 70%, lymphocytes - 13%, monocytes - 5%, platelets - 150x109 /l, ESR
- 40 mm/h. AST - 250 IU, ALT - 200 IU. Bleeding time - 5 min. APTT - 30 s, prothrombin index - 80%. The level of platelet aggregation is increased.

Questions:

1. What disease can hemorrhagic syndrome be a manifestation of?
2. Determine the type of bleeding in the patient.
3. What is the clinical significance of the present laboratory changes?
4. What additional research methods are advisable to carry out to clarify the diagnosis?

Sample answer:

1. Based on the patient's complaints, medical history, laboratory examination data, taking into account the patient's professional activities, the presence of viral hepatitis C and its extrahepatic manifestation in the form of hepatitis should be assumed.
2. The nature of skin rashes in the form of symmetrical hemorrhages that rise above the skin and do not disappear with pressure indicates a vasculitic purpuric type of bleeding. This type is typical for GW.
3. The patient's blood revealed normochromic anemia, moderate thrombocytopenia, and increased platelet aggregation. Since there are no petechiae or bruises, hemorrhages are unlikely to be caused by thrombocytopenia, as well as a disturbance in the plasma hemostasis (normal aPTT and prothrombin index).
4. The most informative diagnostic method is a blood test for the presence of hepatitis C virus (RNA virus) using the polymerase chain reaction method.

Task 64.

A 32-year-old woman consulted a general practitioner with complaints of general weakness, fatigue, weight loss of 10 kg over the past few months, pain in the right submandibular region radiating to the right ear, sore throat when swallowing, pain in the right side of the neck, low-grade fever. Considers himself sick for 5-6 weeks. It is known from the anamnesis that before contacting a general practitioner, she was examined by an otolaryngologist, an infectious disease specialist, and a dentist (exacerbation of chronic tonsillitis, mononucleosis were excluded, the 7th tooth of the upper jaw on the right was extracted, and a course of antibacterial therapy was administered). Treatment without effect. Laboratory signs of severe inflammation: ESR 70 mm/hour, CRP 90 mg/l, hemoglobin 112 g/l. When examining the patient, the doctor revealed peripheral lymphadenopathy and decreased pulsation by

right radial artery. Blood pressure on the right arm is 95/65 mm Hg, on the left arm – 125/80, pulse 75.

Questions:

1. What is the presumptive diagnosis?
2. What is the examination plan?
3. What is the treatment plan?
4. The procedure for interaction between a general practitioner and medical specialists.

Sample answer:

1. Taking into account the patient's gender and age, complaints, medical history and laboratory results, the patient should be assumed to have systemic vasculitis of the Takayasu arteritis type. Pain in the neck without objective reasons, asymmetry of pulsation in the radial arteries and a difference in blood pressure in the arms of more than 10 mm Hg, as well as high levels of ESR and CRP in the absence of changes in the blood flow characteristic of blood diseases or infectious pathologies make this diagnosis the most likely.

2. To confirm the diagnosis of Takayasu arteritis, it is necessary to perform a duplex study of the vessels of the brachiocephalic region, and in the absence of pathological changes, a contrast study of the vessels of the aortic arch (MRI or CT angiography). To exclude the diagnosis of SLE, it is necessary to conduct an immunological test for the presence of ANF, antibodies to double-stranded DNA.

3. The treatment regimen will useglucocorticosteroids. The optimal dose, tapering regimen, and duration of treatment are not clearly defined. Monotherapy with glucocorticoids induces remission in most patients. Prednisolone is usually used. Prednisolone is usually prescribed starting at 1 mg/kg orally once a day for 1–3 months, then the dose is gradually reduced over several months. Lower initial doses may also induce remission. Approximately half of the patients, despite a good initial effect, experience a relapse after dose reduction or drug discontinuation. Methotrexate, cyclophosphamide, azathioprine, mycophenolate mofetil, tumor necrosis factor (TNF) inhibitors (eg, infliximab), and tocilizumab have been used successfully in some patients. They are prescribed if glucocorticoids are not effective enough or their dosage cannot be reduced. Treatment with methotrexate begins with a dose of 0.3 mg/kg once a week, then it is increased to 25 mg per week. Mycophenolate mofetil may also be used. Cyclophosphamide may be prescribed to patients with coronary vasculitis or other serious complications associated with active arteritis. An antiplatelet agent (eg, aspirin 325 mg orally once daily) is often prescribed because platelet-mediated occlusion may play a role in the progression of ischemia. Hypertension must be actively treated; in this case, angiotensin-converting enzyme (ACE) inhibitors may be effective.

4. A rheumatologist must confirm the diagnosis and prescribe treatment. The patient should be consulted with a vascular surgeon to decide on endovascular intervention.

Task 65.

A 35-year-old man consulted a general practitioner with complaints of purulent-bloody nasal discharge, frequent nosebleeds, redness of the eyes, pain in the joints of the hands, general weakness, and an increase in body temperature to 37.5-37.5°C. Complaints persist for 4 weeks after hypothermia (winter fishing). There was purulent sinusitis and otitis media during the same period. He was treated independently (nasal drops, non-steroidal anti-inflammatory drugs (diclofenac), antibiotics (flemoxin-solutab) with a short-term effect. Manifestations of rhinitis progress, nosebleeds continue. During examination, the doctor found in the nasal cavity

granuloma-type formation, elements of erythematous rashes on the skin of the lower extremities

Questions:

1. Can you guess the diagnosis?

2. What is the examination plan?

3. What is the treatment plan?

4. The procedure for interaction between a general practitioner and medical specialists.

Sample answer:

1. The presence of an inflammatory syndrome, progressive rhinitis, accompanied by purulent-hemorrhagic discharge, with periodic nosebleeds, skin rashes, granuloma-type formation in the nasal cavity suggest that the patient has a systemic process like vasculitis, most likely granulomatosis with Wegener's polyangiitis (WPA). In terms of differential diagnosis, there are other ANCA-associated vasculitis and diseases of the ENT organs.

2. It is necessary to conduct a comprehensive examination to confirm the diagnosis and exclude involvement of the lower respiratory tract, kidneys and other organs in the process: - CBC, biochemical blood test - biochemical markers of functional activity of the liver and kidneys (Total bilirubin and fractions, GGTP, ALP, ALT, AST, creatinine , urea, total protein, albumin), blood electrolytes (potassium, sodium, calcium). Immunological markers of immune inflammation: CRP, RF, ANF, ANCA (to proteinase-
3 and myeloperoxidase). CT scan of the chest. Biopsy of a formation in the nasal cavity.

3. Corticosteroids with methotrexate or rituximab are used to induce remission. Next, rituximab alone or other drugs such as methotrexate, azathioprine or mycophenolate mofetil (rituximab plus another of these drugs, sometimes along with a low dose of corticosteroids if patients have multiple relapses) are given to maintain remission. If necessary (development of AKI with transformation into AKP, and then into ESRD) - kidney transplantation. Patients with severe manifestations that threaten life or the functioning of individual organs (for example, alveolar hemorrhage, rapidly progressing glomerulonephritis, acute multiple mononeuropathy with motor impairment) require immediate hospitalization and initiation of treatment to achieve remission. These patients are treated with high doses of corticosteroids and cyclophosphamide or rituximab. The latter appears to be particularly useful in reducing the risk of relapse. Doses of corticosteroids are reduced to the lowest possible, followed by discontinuation. Irrigation of the paranasal sinuses with isotonic sodium chloride solution, with or without 2% mupirocin nasal ointment, helps reduce crusting and the development of secondary staphylococcal infections.

4. A rheumatologist must confirm the diagnosis and prescribe treatment. Consultation with an otolaryngologist, pulmonologist and nephrologist is also required.

Task 66.

A 53-year-old man presented with several months of cough, shortness of breath, fever, and weight loss. Notes periodic cough with streaks of blood or pink sputum. A chest x-ray reveals cavities. In urine analysis - red blood cells, red blood cell casts, protein. In the UAC – eosinophilia. There is no response to ongoing antibiotic therapy. Sputum culture is negative (including tuberculosis). A year ago I was diagnosed with bronchial asthma. On auscultation - dry rales over the entire surface of the lungs. History of multiple food allergies.

Questions:

1. Can you guess the diagnosis?

2. What is the examination plan?

3. Treatment plan

4. The procedure for interaction between a general practitioner and medical specialists.

Sample answer:

1. Based on the patient's complaints, anamnesis, examination (involvement of the lungs, kidneys), laboratory and instrumental examination data (eosinophilia, albuminuria, e. casts), it can be assumed that the patient has eosinophilic granulomatosis with Churg-Strauss polyangiitis.

2. To confirm the diagnosis, the following is required: a detailed biochemical blood test, CRP, RF, ANCA antibodies, Echo-CG, CT scan of the chest, kidney biopsy.

3. The mainstay of treatment for eosinophilic granulomatosis with polyangiitis (EGPA) is systemic corticosteroid therapy together with immunosuppressants, since corticosteroid monotherapy often does not maintain remission even in the absence of adverse prognostic factors. Depending on the severity and type of organ involvement, other immunosuppressants (eg, cyclophosphamide, rituximab, methotrexate, azathioprine) are added to the course of therapy, based on the same general criteria as for the treatment of granulomatosis with polyangiitis or microscopic polyangiitis. Cardiac damage, manifested by myocarditis with heart failure, is the main cause of death in EGPA. In this connection, symptomatic and pathogenetic therapy is required according to current clinical recommendations with the use of ACE inhibitors, beta blockers, AMKR, NGLT2 inhibitors, etc. in order to achieve compensation for HF symptoms.

4. An integrated approach to the management of this patient requires consultation with a hematologist, rheumatologist, and pulmonologist.

Task 67.

Woman A., 36 years old, an accountant, turned to her local physician with complaints of general malaise, weakness, weight loss of 5 kg in 2 months, migrating pain in the interphalangeal joints of the hands and ankle joints, red spots of irregular shape on the face, low-grade fever bodies. Considers himself sick for about 6 months.

The onset of the disease is gradual. Pain appeared in the interphalangeal joints, their swelling and hyperemia, alternately on the right and left hand. Weakness and malaise gradually set in. She did not seek medical help. 2 months ago (July) - vacation in Thailand. After returning, she noted a deterioration in her health: increased weakness, pain in the ankle joints, began to lose weight for no apparent reason, body temperature increased to 37.5°C, without chills.

She noted the presence of red spots on her face; for a long time she considered them the consequences of tanning. During the next routine medical examination, anemia and changes in the urine were detected, and therefore she turned to her local physician.

On examination: the skin and visible mucous membranes are pale, a “vascular butterfly” in the area of the bridge of the nose and irregularly shaped cheeks, the hair is dull, brittle, there are areas of baldness. Subcutaneous fat tissue is practically absent. There is no swelling. Submandibular, axillary, and inguinal lymph nodes are palpated, 0.5-1 cm in diameter, soft consistency, painless on palpation. Muscle tone and strength are normal, equal on both sides. The parts of the skeleton are proportional, the bones are painless upon palpation and tapping. There is swelling of the proximal and distal interphalangeal joints of the hands and ankles, pain when moving in them, and local hyperemia.

The chest is normosthenic, symmetrical, and evenly participates in breathing. Percussion above the lungs there is a clear pulmonary sound. Breathing is vesicular, no wheezing. The pulse is rhythmic, 78 per minute, blood pressure is 120/80 mm Hg. Art. The apex beat is visual and

cannot be determined by palpation. The boundaries of relative cardiac dullness: right - 0.5 cm from the right edge of the sternum, upper - the lower edge of the third rib, left - 1 cm medially from the midclavicular line. Auscultation: the tones are dull, rhythmic, heart rate - 78 per minute. Swelling and hyperemia of the red border of the lips. The abdomen is symmetrical, soft, painless in all parts on superficial and deep palpation. The liver is not enlarged. The effleurage symptom is negative on both sides, the kidneys are not palpable, palpation in their projection is painless.

Laboratory examination:

General blood test: hemoglobin - 99 g/l, red blood cells - 2.9 × 1012/l, color index - 0.9; leukocytes - 2.7×109/l, eosinophils - 4%, band neutrophils - 3%, segmented neutrophils - 52%, lymphocytes - 35%, monocytes - 6%; ESR - 30 mm/h, platelets
- 98×10%.

General urine analysis: light yellow, transparent, acidic pH, specific gravity - 1016; protein - 0.3 g/l, sugar - none, leukocytes - 1-2 in the field of view, renal epithelium - 2-4 in the field of view, erythrocytes - 3-4 in the field of view, hyaline casts - 5-8 in the field of view , waxy cylinders - 2-3 in the field of view, no salt.

Biochemical researchblood: total bilirubin - 38.8 μmol/l, direct - 8.2, indirect - 30.6 μmol/l, creatinine - 108 mmol/l, glucose - 4.3 mmol/l, AST - 10.0 mmol/ l, ALT - 19.0 mmol/l, cholesterol - 4.0 mmol/l, potassium - 3.9 mmol/l, total protein - 86 g/l, albumin - 45%, α1 - 3.5%, α2 – 10.5%, β - 13.6%, γ - 27.4%, fibrinogen - 6.2 g/l, CRP - + + +, seromucoid - 0.32 g/l.

Antibodies to DNA, antinuclear factor, 6 LE cells per 1000 leukocytes were detected.

ECG: sinus rhythm, heart rate - 64 beats per minute. The electrical axis is tilted to the left. Diffuse dystrophic changes in the myocardium of the left ventricle.

X-ray of the chest organs: without pathology.

X-ray of the joints of the hands and ankles revealed no pathological changes.

Questions:

1. Guess the most likely diagnosis.
2. List the identified syndromes.
3. Draw up and justify a plan for additional examination of the patient.
4. Create a treatment plan for this patient.
5. Determine the patient's prognosis and ability to work.

Sample answer:

1. Preliminary diagnosis: Systemic lupus erythematosus, subacute course, with damage to the skin, joints, lymph nodes, and kidneys. Activity III degree. Arthritis of the metacarpophalangeal and interphalangeal joints of the hands. Anemia of mild severity, normochromic.

2. Syndromes: cutaneous, articular, febrile, lymphadenopathy, anemic, urinary.

3. The patient is recommended to undergo further examination:

- EchoCG (detection of heart damage);
- determination of GFR by calculation method (determination of chronic renal failure and CKD);
- kidney biopsy (gold standard for diagnosis);
- immunological indicators for systemic markers, Sm - antigen, antiphospholipid antibodies

4. Avoid psycho-emotional stress, reduce sun exposure, and do not use oral contraceptives with a high estrogen content. A diet high in polyunsaturated fatty acids, calcium, vitamin D.

Drug treatment: non-steroidal anti-inflammatory drugs, aminoquinolinone drugs, glucocorticoids. Recommended Daily Dose

glucocorticoids should not exceed 20-25 mg; plaquenil is prescribed at a dose of 200-400 mg per day. For high activity, pulse therapy with 6-methylprednisolone infusion is indicated.
3 days 500-1000 mg. The duration of therapy is practically unlimited and can last for many years. When improvement is achieved, a decrease in disease activity, the dose of glucocorticoid can be slowly reduced (usually 1 mg every 7-10 days) to maintenance, which varies depending on the course of the disease, damage to a particular organ or system, the risk of exacerbation, comorbid diseases and complications.

For induction therapy, cyclophosphamide or mycophenolate mofetil is used. Cyclophosphamide is prescribed 1000 mg intravenously monthly for 6 months or 500 mg every 2 weeks, up to 6 infusions. Mycophenolate mofetil is prescribed at a dose of 2-3 g per day for 6 months. Cyclophosphamide and mycophenolate mofetil are used in combination with pulse therapy with 6-methylprednisolone and subsequent oral glucocorticoids at a dose of 0.5-1.0 mg/kg. Induction therapy is carried out over 3-6 months. When a clinical and laboratory effect is achieved, cytostatics are used as maintenance therapy: mycophenolate mofetil in doses of 1-2 g per day or azathioprine 2 mg/kg per day for 6 months. It is possible to use genetically engineered biological drugs (Rituximab or Orencia).

5. The prognosis is relatively favorable: it is possible to achieve stable clinical and laboratory remission with lifelong maintenance therapy.

It is necessary to determine the disability group (II).

Task 68.

Patient B., 24 years old, complains of headache, weakness, joint pain, and erythematous rash on the back.

Ill for 3 years. The disease began with high fever, the appearance of an erythematous rash on the trunk and limbs, and gross hematuria. She received Prednisolone 30 mg per day irregularly, but subsequently refused treatment. A year later, arthritis developed and generalized enlargement of the lymph nodes appeared. The examination revealed pericarditis and pleurisy. Present deterioration within 2 months.

Objectively: the condition is serious. Reduced nutrition. The skin is dry, with areas of erythematous rash on the skin of the back. Enlarged lymph nodes up to 1 cm in diameter are palpated. There is stiffness and swelling in the interphalangeal joints of the hands. There are no deformations. Breathing is weakened in the lower sections on both sides, and there is dullness on percussion. The heart is expanded in diameter (14.5 cm), the sounds are muffled. Pulse – 58 beats per minute, the rhythm is correct. Blood pressure – 150/90 mm Hg. Art. The liver protrudes from under the edge of the costal arch by 1.5 cm. The spleen is not palpable. Swelling of the legs.

Complete blood count: hemoglobin – 64 g/l, erythrocytes – 1.8×1012/l, platelets – 180×109/l, leukocytes – 4.2×109/l, ESR – 56 mm/h.
Urinalysis: specific gravity – 1010, protein – 1.2%, sediment up to 40 red blood cells in the field of view, serum cholesterol – 6.4 mmol/l, serum creatinine – 124 μmol/l, total serum protein – 51 g/l, albumin – 25 g/l.

Questions:

1. State the suspected diagnosis.
2. Suggest a plan for additional examination of the patient?
3. What causes changes in laboratory parameters?
4. What diseases are differentially diagnosed?
5. Suggest a treatment plan.

Sample answer:

1. Preliminary diagnosis: Systemic lupus erythematosus with lesions of the skin, lymph nodes, heart, kidneys, joints and anemia, subacute course. Activity III degree.

2. Additional examination plan:

- general blood test, general urinalysis;

- biochemical blood test: total protein, protein fractions, cholesterol, creatinine, urea, bilirubin;

- immunological indicators: LE cells, circulating immune complexes, complement activity, rheumatoid factor, antinuclear factor, antinuclear antibodies - antibodies to double-stranded DNA, to Sm-antigen. Antibodies to the C1q complement component;

- laboratory markers of antiphospholipid syndrome: antibodies to phospholipids
- lupus anticoagulant, antibodies to cardiolipin;

- consultations with ophthalmologists, psychiatrists, and neurologists.

3. Systemic lupus erythematosus is characterized by overproduction of a wide range of organ-nonspecific autoantibodies to various components of the nucleus and immune complexes, causing immunoinflammatory damage to internal organs.

Kidney damage with the development of nephrotic syndrome. Autoimmune hemolytic anemia.

4. Differential diagnosis should be carried out with drug-induced lupus, granulomatous vasculitis with polyangiitis, HIV infection, chronic glomerulonephritis, rheumatoid polyarthritis.

5. Avoid psycho-emotional stress, reduce sun exposure, and do not use oral contraceptives with a high estrogen content. A diet high in polyunsaturated fatty acids, calcium, vitamin D.

Drug treatment: non-steroidal anti-inflammatory drugs, aminoquinolinone drugs, glucocorticoids. The recommended daily dose of glucocorticoids should not exceed 20-25 mg; plaquenil is prescribed at a dose of 200-400 mg per day. For high activity, pulse therapy with 6-methylpednisolone infusion is indicated.
3 days 500-1000 mg. The duration of therapy is practically unlimited and can last for many years. When improvement is achieved, a decrease in disease activity, the dose of glucocorticoid can be slowly reduced (usually 1 mg every 7-10 days) to maintenance, which varies depending on the course of the disease, damage to a particular organ or system, the risk of exacerbation, comorbid diseases and complications.

For induction therapy, cyclophosphamide or mycophenolate mofetil is used. Cyclophosphamide is prescribed for the development of lupus nephritis, 1000 mg intravenously monthly for 6 months or 500 mg every 2 weeks, up to 6 infusions. Mycophenolate mofetil is prescribed at a dose of 2-3 g per day for 6 months. Cyclophosphamide and mycophenolate mofetil are used in combination with pulse therapy with 6-methylprednisolone and subsequent oral glucocorticoids at a dose of 0.5-1.0 mg/kg. Induction therapy is carried out over 3-6 months. When a clinical and laboratory effect is achieved, cytostatics are used as maintenance therapy: mycophenolate mofetil in doses of 1-2 g per day or azathioprine 2 mg/kg per day for 6 months.

Antihypertensive drugs: ACE inhibitors (monopril 10 mg once a day), calcium antagonists (amlodipine 5 mg once a day). Plasmapheresis.

Task 69.

Woman M., 45 years old, programmer, was admitted to the therapeutic department with complaints of increasing general weakness, pain, limitation of movements and numbness, mainly of the fingers, in both hands, a slight dry cough, palpitations during physical activity, decreased appetite, dry mouth, difficulty chewing and swallowing.

She considers herself sick since the age of 32: after severe hypothermia, she first began to notice numbness in the fingers of both hands when washing them with cold water, gradually

The duration of numbness increased, and it began to occur with a slight decrease in air temperature. At the same time, increased sweating of both palms appeared. Gradually, over the course of 6 months, general weakness and loss of appetite developed, and therefore the patient went to the clinic at her place of residence.

Research has been donegeneral blood test, chest x-ray, FGDS, but the cause of asthenia was not identified. The numbness of the fingers persisted, and gradually limited mobility of the fingers and pain in the nail phalanges of the hands appeared. When re-examined a year later, a diagnosis of rheumatoid arthritis was made, and the patient was prescribed Prednisolone 20 mg/day, with which the pain was relieved, but numbness in the hands persisted, and the patient independently stopped taking Prednisolone. At the age of 42, after exposure to sun exposure, the patient began to notice difficulty swallowing, a dry cough, and palpitations when walking. Over the past 6 months, the pain in the nail phalanges has sharply increased when trying to work on the computer keyboard. The skin is uniformly hyperpigmented. The skin of the hands and fingers is cold, compacted, evenly thickened, not folded, and there are no wrinkles over the interphalangeal joints. The nail phalanges of all fingers are shortened. The muscles of the shoulder and pelvic girdle are atrophic, the forearms are compacted and rigid. The volume of passive and active movements in the interphalangeal joints is sharply reduced. Breathing is shallow, 24 per minute. A decrease in lung excursion and a symmetrical weakening of vesicular respiration in the lower sections was revealed. Blood pressure - 110/70 mm Hg. Art. Heart sounds are irregular, 88 per minute, single extrasystoles; The first tone over the apex and base of the xiphoid process is weakened. The abdomen is soft, painless on both superficial and deep palpation.

Laboratory examination:

General blood test: red blood cells - 3.1×1012/l, hemoglobin - 95 g/l, color index - 0.85; leukocytes - 15.3×109/l; eosinophils – 2%, band neutrophils
– 8%, segmented neutrophils – 72%, lymphocytes – 17%, monocytes – 1%; ESR - 27 mm/h.

Biochemical blood test: total protein - 75 g/l; albumins - 40%, globulins - 60%, 1 - 3.8%, 2 - 12%; - 12%; – 32.2%; fibrinogen – 6.6 g/l; SRB (++).
Repeated studies of LE cells in the blood are negative.

ECG: single extrasystoles, hypertrophy of the right heart. X-ray of the chest organs:

"honeycomb" lung, symptoms of pneumosclerosis,
mainly in the lower sections.

X-ray of the hands: osteolysis of the distal phalanges, epiphyseal osteoporosis. Questions:

1. Formulate a preliminary diagnosis.
2. Based on what syndromes was the preliminary diagnosis made?
3. Draw up and justify a plan for additional examination of the patient.
4. Determine the treatment strategy for this patient. Justify your choice.
5. Determine the prognosis of the disease and the patient's ability to work.

Sample answer:

1. Preliminary diagnosis: Systemic scleroderma, chronic course, activity II, cutaneous form with Raynaud's syndrome, sclerodactyly, dysphagia, pulmonary fibrosis, DN I.

2. The diagnosis was made on the basis of identified Raynaud's syndrome, scleroderma, articular, dysphagia, respiratory failure, anemic and immune disorders.

3. The patient is recommended (to confirm and clarify the diagnosis): wide-field capillaroscopy of the nail bed, immunogram, radiography of the esophagus with contrast, skin biopsy, echocardiography, 24-hour ECG monitoring,

external respiration function, FGDS, fundus, antibodies to DNA, determination of antinuclear factor, atycentromere antibodies and anti-Scl 70.

1. 4. Taking into account the development of visceropathies with dysfunction of a number of organs, the patient is prescribed methotrexate once a week subcutaneously or orally for 6–12 months or more + prednisolone 0.5–1 mg/kg body weight per day orally for 2 –4 weeks followed by gradual withdrawal. In order to timely identify side effects, it is necessary to monitor the condition of peripheral blood, for which, until a stable dose is achieved, a general blood test is performed weekly to determine the number of leukocytes and platelets and a biochemical blood test (ALT, AST, alkaline phosphatase, bilirubin, albumin), then every 4-8 weeks Methotrexate therapy is stopped if the leukocyte count in the blood is less than 1.5x109/l, the neutrophil count is less than 0.2x109/l, and the platelet count is less than 75x109/l. It is also necessary to monitor liver and kidney function. Patients receiving methotrexate should avoid immunization (unless approved by a physician) for at least 3 months. up to 1 year after taking the drug.

In order to reduce the frequency and severity of undesirable effects, folic acid is used: 1 tablet (1 mg) orally once a day, except on the day of methotrexate administration, or 5 mg once a week 1–3 days after taking methotrexate.

Hydroxychloroquine 200 mg 2 times a day orally, with a gradual reduction in dose to 100-200 mg per day, course of treatment up to 6 months.

Vasodilating and antiplatelet agents: pentoxifylline 100–200 mg orally 3 times a day or 400 mg orally 1–2 times a day for 4–6 weeks; calcium antagonists (amlodipine 5 mg). For the healing of digital ulcers - prostaglandin E preparations.

Considering the damage to the esophagus, split meals are necessary, the last meal no later than 18 hours, in case of severe dysphagia - metoclopramide 10 mg 3-4 times / day, in the presence of reflux esophagitis - omeprazole 20 mg / day.

Sanatorium treatment is contraindicated. Outside of disease activity, massage, exercise therapy.

5. The prognosis is unfavorable and is associated with visceral lesions. The patient is disabled; a disability group (II) must be determined.

Task 70.

Patient P., 46 years old, was admitted to the therapeutic department of a city clinical hospital with complaints of severe muscle pain, muscle weakness, fever up to 38 0C, the appearance of edema, itchy spots on the skin of the face, neck, and chest.

Considers himself sick for about 3 days, associates the onset of the disease with excessive physical activity several days before the onset of pain.

Objectively: the general condition is of moderate severity. Consciousness is clear. The position is passive (the patient lies in bed). Body temperature 37.6 0C. The skin on the face, around the eyes, neck, and chest is clearly hyperemic and swollen. To the touch it has a doughy consistency. Slightly raised erythematous scaly rashes over the knuckles. Redness and peeling of the skin of the palms. The patient has a normal build and a moderate diet. The muscles are developed normally. Muscle tone is sharply reduced. The muscles of the shoulder and pelvic girdle are compacted, increased in volume, have a doughy consistency, and are very painful on palpation. The strength of these muscles is reduced to 1-2 points. The joints are not changed, movements in the joints are limited due to muscle pain. Lymph nodes are not enlarged. The chest is painful on palpation. Percussion - clear pulmonary sound. In the lungs, breathing is vesicular, weakened by a respiratory rate of 16 per minute. The boundaries of the heart are not changed. The heart sounds are muffled and rhythmic. Pulse 82/min, blood pressure -110/170 mmHg. Art. The abdomen is calm and painless.

Complete blood count: erythrocytes - 4.6x1012/l, hemoglobin - 139 g/l, leukocytes - 15.0x109/l, band neutrophils - 2%, segmented neutrophils - 70%, eosinophils - 2%, lymphocytes - 19%, monocytes - 7%, ESR - 26 mm/h.

General urine test: clear, acidic reaction. Specific gravity - 1015, no protein, 2-3 leukocytes per cell.

Biochemical blood test: protein - 81 g/l, AST - 98 IU/l, ALT - 100 IU/l, CPK - 1002 IU/l cholesterol - 5.2 mmol/l, CRP ++, total bilirubin 12 µmol/l, creatinine - 120 µmol/l, urea - 4.52 mmol/l. seromucoids 46 units.

Electromyography: short small polyphasic motor units fibrillation. Skeletal muscle biopsy: signs of muscle fibril necrosis types 1 and 2, phagocytosis, regeneration with basophilia, large nuclei and nucleoli in the sacrolemma, perifascial atrophy, variability in microfibril size, inflammatory exudate.

Questions:

1) Formulate a preliminary diagnosis.
2) Justify your diagnosis.
3) Identify the main syndromes of this disease.
4) Prescribe treatment.

Sample answer:

1. Preliminary diagnosis: Primary idiopathic polymyositis, acute course.

2. The diagnosis of "polymyositis" was made based on the patient's complaints of severe muscle pain, muscle weakness, fever up to 38 0C, the appearance of swelling, itchy spots on the skin of the face, neck, chest; objective examination data (the patient is lying in bed, body temperature is 37.6 0C; the skin on the face, around the eyes, neck, chest is brightly hyperemic, swollen, and has a pasty consistency to the touch; slightly raised erythematous scaly rashes, redness and peeling above the finger joints the skin of the palms; muscle tone is sharply reduced, and the muscles of the shoulder and pelvic girdle are compacted, increased in volume, doughy in consistency, very painful on palpation, their strength is reduced to 1-2 points); as well as laboratory data (increased CPK) and instrumental examinations (short small polyphasic motor units of fibrillation during electromyography and signs of necrosis of muscle fibrils of types 1 and 2, phagocytosis, regeneration with basophilia, large nuclei and nucleoli in the sacrolemma, perifascial atrophy, variability in microfibril size, inflammatory exudate during skeletal muscle biopsy).

3. Myasthenic and cutaneous syndromes.

4. It is recommended to avoid factors that can provoke an exacerbation of the disease: avoid exposure to the sun, smoking, contact with infectious patients, avoid physical and psycho-emotional overload.

Factors that increase the risk of developing side effects of glucocorticoid therapy should be excluded: do not eat sweet foods, including honey and sweet fruits, which increase the risk of developing steroid diabetes, avoid spicy foods, use gastroprotectors (omeprazole, pantoprazole) to prevent ulcerative complications.

2. Drug therapy consists of prescribing glucocorticoids (prednisolone/metipred). The initial dose of prednisolone is 1 - 2 mg/kg/day. The daily dose of the drug at the beginning of treatment should be divided into 3 doses (assessing its tolerability), but during the first half of the day, then transfer the patient to taking a full dose of prednisolone in the morning. Evaluation of the effectiveness of therapy is carried out 2-4 weeks from the start of glucorticoid therapy. The duration of the initial dose of prednisolone is on average 2.5-3 months.

A reduction in the dose of prednisolone begins when the level of CPK in the blood serum is normalized, spontaneous activity disappears during electromyography, muscle strength and range of motion increase, and is carried out under strict clinical and laboratory control. The dose of prednisolone is gradually reduced by 1/4 of the initial dose per month, on average, by 1/2 - 1/4 tablets every 5-7-10 days until a maintenance level is reached. The rate of decline depends on the initial dose of prednisolone and the degree of disease activity. The lower the glucocorticoid dose, the slower its decline.

Calcium supplements in combination with vitamin D and bisphosphonates (Xidifon, Fosamax) are recommended.

When detecting calcification, the disodium salt of ethylenediaminetetraacetic acid (Na2EDTA) is used, forming complex compounds with various cations, incl. with Ca2+ ions and promoting their excretion in the urine.

3. If glucorticoid therapy is insufficiently effective, immunosuppressive therapy may be prescribed: methotrexate 7.5–25 mg/week orally or intravenously, azathioprine 2–3 mg/kg/day (100–200 mg/day). In case of resistance to glucocorticoid therapy - cyclosporine A at 2.5–5.0 mg/kg/day, as well as mycophenolate mofetil.

Task 71.

Patient B., 49 years old, complains of erythematous skin rashes, shortness of breath on exertion, progressive muscle weakness, choking when eating, voice changes, and severe general weakness.

The patient considers himself sick for about 6 months from the moment of the appearance of erythematous rashes; later, muscle weakness appeared, which progressed in the last month.

Objectively: The general condition is of moderate severity. There are erythematous rashes on the skin of the décolleté and above the extensor surface of the proximal interphalangeal joints. Periorbital edema. The muscles of the forearms, legs and thighs are dense, painful on palpation.

General blood test: erythrocytes - 4.3x1012/l, Hb - 120 g/l, leukocytes - 8.0x109/l, platelets - 400.0x109/l, ESR - 50 mm/hour.

Blood chemistry:ALT - 200 U/l, AST - 250 U/l, CPK - 1600 U/l, Myoglobin (+++).

An x-ray of the esophagus shows a decrease in the tone of the esophageal wall. According to myography (conventional, stimulation), a decrease in potentials is observed.

Questions:

1. Formulate a preliminary diagnosis.
2. What diagnostic method must be performed to confirm the diagnosis?
4. Prescribe treatment.

Sample answer:

1. Primary idiopathic dermatomyositis affecting muscles and skin. Acute course.
2. Biopsy of striated muscle.
3. SSD, cancer.
4. It is recommended to avoid factors that can provoke an exacerbation of the disease: avoid exposure to the sun, smoking, contact with infectious patients, avoid physical and psycho-emotional stress.
4. Drug therapy consists of prescribing glucocorticoids (prednisolone/metipred). The initial dose of prednisolone is 1 - 2 mg/kg/day. The daily dose of the drug at the beginning of treatment should be divided into 3 doses (assessing its tolerability), but during the first half of the day, then transfer the patient to taking the full dose

prednisolone in the morning. Evaluation of the effectiveness of therapy is carried out 2-4 weeks from the start of glucorticoid therapy. The duration of the initial dose of GC is on average 2.5-3 months.

A reduction in the dose of prednisolone begins when the level of CPK in the blood serum is normalized, spontaneous activity disappears during electromyography, muscle strength and range of motion increase, and is carried out under strict clinical and laboratory control. The dose of prednisolone is gradually reduced by 1/4 of the initial dose per month, on average, by 1/2 - 1/4 tablets every 5-7-10 days until a maintenance level is reached. The rate of decline depends on the initial dose of prednisolone and the degree of disease activity. The lower the glucocorticoid dose, the slower its decline.

Calcium supplements in combination with vitamin D and bisphosphonates (Xidifon, Fosamax) are recommended.

When detecting calcification, the disodium salt of ethylenediaminetetraacetic acid (Na2EDTA) is used, forming complex compounds with various cations, incl. with Ca2+ ions and promoting their excretion in the urine.

5. If glucorticoid therapy is insufficiently effective, immunosuppressive therapy may be prescribed: methotrexate 7.5–25 mg/week orally or intravenously, azathioprine 2–3 mg/kg/day (100–200 mg/day). In case of resistance to glucocorticoid therapy - cyclosporine A at 2.5–5.0 mg/kg/day, as well as mycophenolate mofetil.

6. If dysphagia develops, it is recommended to carry out pulse therapy with metipred 1000 mg N 3 in combination with oral administration of a glucocorticoid in an adequate dose.

Task 72.

Patient U., 24 years old, a paramedic, was sent to the hospital with complaints of pain with an inflammatory rhythm in the joints of the hands and ankles, and the presence of morning stiffness in the joints for up to 1 hour. He also notes an increase in body temperature to subfebrile levels in the evenings, the appearance of a rash on the face in the cheekbones, general weakness, and hair loss. From the anamnesis: she considers herself sick for 2 years, when she began to notice the appearance of hyperemia of the skin of the face and neck in response to insolation. Since the summer of this year, after hyperinsolation (I was on vacation in the south) and overheating, erythematous rashes appeared on the neck and arms. Two weeks after returning home, she noted an increase in body temperature to febrile levels. At the place of residence, a diagnosis of acute respiratory infection was made, and therapy with antibacterial drugs was carried out without effect. Additional examination revealed protein in the urine. Sent to hospital. On examination: the general condition is of moderate severity. Skin: erythematous rash in the form
"butterflies" on the skin of the face and décolleté. Symmetrical swelling up to the lower third of the legs. Mucous membranes are clean. Breathing is vesicular, no wheezing. NPV – 17 per minute. Heart sounds are clear, the rhythm is correct. Heart rate - 92 beats per minute, blood pressure - 140/80 mm Hg. Art. The abdomen is soft, painless, the liver does not protrude from under the edge of the costal arch along the midclavicular line. Urination is free and painless. The stool is regular and formed. Swelling in the area of the II, III metacarpophalangeal and II proximal interphalangeal joints, in the area of the ankle joints; limitation of movements due to pain, hand grip - 80%; no deformations. Complete blood count: red blood cells – 3.6×1012/l, hemoglobin
– 86 g/l, platelets – 100×109/l, leukocytes – 1.6×109/l, eosinophils – 1%, band neutrophils – 8%, segmented neutrophils – 59%, lymphocytes – 25%, monocytes – 4%, ESR – 22 mm/h. General urine analysis – cloudy, color – yellow, density – 1.022, reaction – acidic, protein – 0.560 g/l, glucose – negative, leukocytes
- 20-25 in sight. Biochemical blood test: creatinine - 118 μmol/l, urea - 8.8 mmol/l, total protein - 67 g/l, albumin - 45%, α1 - 4%, α2 - 15%, β - 9%, γ - 27%, fibrinogen – 6.3 g/l. Antibodies to DNA and antinuclear factor – more than 200 U/ml.

Questions:

1. Guess the most likely diagnosis.

2. Justify your diagnosis.

3. Draw up and justify a plan for additional examination of the patient.

4. What drug groups would you recommend to a patient as part of combination therapy? Justify your choice.

Sample answer:

1. Systemic lupus erythematosus, subacute, highly active with damage to the skin (erythema, photosensitivity), joints (arthralgia, arthritis), kidneys (lupus nephritis), blood (thrombocytopenia, anemia, leukopenia).

2. The diagnosis of "systemic lupus erythematosus (SLE)" was established based on the patient's complaints about the presence of an erythematous rash in the cheekbones, fever, articular syndrome, and medical history (the patient noted an allergic reaction to insolation for 2 years); establishing the course of SLE is based on the history of the disease (constitutional symptoms at the onset, nonspecific damage to the skin and joints, periodic exacerbations, development of multiple organ symptoms within 2 years from the onset of the first symptoms). The degree of SLE activity was established based on the presence of manifestations of arthritis, proteinuria (0.560 g/day), skin rashes (erythematous rash on the cheekbones), alopecia (diffuse hair loss), increased levels of antibodies to double-stranded DNA (more than 200 U/ml), thrombocytopenia (100×109/l), leukopenia (1.6×109/l), kidney damage (proteinuria, decreased GFR).

3. The patient is recommended: Ultrasound examination of the kidneys to assess target organ damage, decision on whether to perform a nephrobiopsy to determine lupus nephritis. Chest X-ray (lung damage). Echocardiography (to assess myocardial wall thickness, diastolic and systolic function, to exclude pericarditis). Blood test: immunological blood test with determination of complement components, hemostasiogram.

4. Short-acting glucocorticosteroids (Prednisolone or Methylprednisolone). This group of drugs is the most effective for the treatment of SLE. With a high degree of SLE activity, pulse therapy is indicated in order to achieve a quick effect (500-1000 mg of Methylprednisolone intravenously for three days). Cytostatic immunosuppressants (Cyclophosphamide or Mofetylamicophenolate) are prescribed to patients with SLE with a progressive course, high activity, accompanied by damage to vital organs and systems. Cytostatics are an essential component of the treatment of SLE, especially with a threatening course with damage to the kidneys, central nervous system, generalized vasculitis, and alveolitis.

Task 73.

Patient P., 37 years old, was taken to the hospital emergency department due to heavy nosebleeds. Complaints of weakness, dizziness.

History: over the past 5 years, he has noted frequent nosebleeds and easy bruising of the skin. Examined by an otolaryngologist - no pathology in the ENT organs was detected. Blood pressure is within normal limits. When taking a family history, it turned out that the mother also had frequent nosebleeds. Objectively: upon examination the condition is satisfactory. The skin is pale, there are abundant petechial hemorrhagic rashes and isolated extensive ecchymoses on the skin of the chest and legs. In the lungs there is vesicular breathing, no wheezing. Heart sounds are clear, rhythmic, heart rate 70 per minute, blood pressure 120/80 mmHg. The liver and spleen are not enlarged. The effleurage symptom is negative on both sides. Stool and diuresis are not disturbed. Complete blood count: hemoglobin
- 94 g/l, erythrocytes - 3.6 × 1012/l, CP - 0.68, leukocytes - 6.2 × 109/l, ESR - 20 mm/h. Leukocyte formula: band - 3%, segmented - 67%, eosinophils - 2%, lymphocytes - 23%, monocytes - 5%, platelets 15 × 109/l.

Questions:

1. Identify the main clinical syndromes
2. Formulate and justify a preliminary diagnosis.
3. Name the necessary additional research.
4. Make a treatment plan.

Sample answer:

1. Main clinical syndromes: hemorrhagic with petechial-spotted type of bleeding, anemic.
2. Preliminary diagnosis: hereditary thrombocytopenia, continuously relapsing course, exacerbation. Posthemorrhagic hypochromic anemia of mild severity.

The diagnosis was made on the basis of complaints of frequent nosebleeds, spontaneous appearance of bruises on the body, taking into account family history (the mother has similar symptoms), objective examination data that revealed a petechial-spotted type of hemorrhagic syndrome, and the absence of other competitive diseases in the patient with the possible development of hemorrhagic syndrome. syndrome, and also taking into account the results of the OAC - severe thrombocytopenia. The diagnosis of posthemorrhagic anemia was established based on a history of frequent bleeding and a decrease in hemoglobin to 94 g/l.

3. Additional studies needed for confirmation

diagnosis: determination of Duke bleeding time, blood clot retraction time, APTT, PTT, INR, autoantibodies to platelets (platelet membrane glycoproteins GPIIb/IIIa, GPIb-IX/V), if necessary, bone marrow examination.

4. Glucocoricosteroids (methylprednisolone) at a dose of 1–1.5–2 mg per 1 kg of body weight per day for 3–4 weeks.

Task 74.

Patient N., 16 years old, was admitted with complaints of pain and swelling of the left knee joint, hematuria, and general weakness. From the anamnesis: from childhood periodically noted nose and gum bleeding, extensive hematomas of various localization repeatedly appeared, there were hemarthrosis of the elbow and knee joints, my maternal uncle also had joint damage since childhood, frequent prolonged nosebleeds, frequent causeless formation of extensive hematomas) . The general condition is moderate. The position is forced due to severe pain. The skin and visible mucous membranes are pale and clean. The right elbow and right knee joints are deformed. The left knee joint is deformed, painful on palpation, hot to the touch. In the lungs there is vesicular breathing, no wheezing. Heart sounds are clear, rhythmic, heart rate 70 per minute, blood pressure 120/80 mmHg. The liver and spleen are not enlarged. The effleurage symptom is negative on both sides. Stool and diuresis are not disturbed. CBC: Red blood cells 3.6 g/l, HB 116.3 g/l, CP 0.82. Platelets 180.0 G/l.

Leukocytes 7.5 g/l, segmented - 66%, lymphocytes 19%, monocytes 15%. ESR 28 mm/h. Anisocytosis +; poikilocytosis +; microcytosis+. OAM. The reaction is neutral, beat. weight 1013, protein negative, ep. class flat 1-2 in square sp., leukocytes 0-1-2 in area. vision, red blood cells 10 -15 per square. vision, unchanged. Biochemical blood test: creatinine 79.3 µmol/l. total protein 79.3 g/l, bilirubin 19.5 µmol/l, AST 0.22 mmol/l, ALT 0.19 mmol/l, blood glucose 4.8 mmol/l.

Questions:

1. Identify the main syndromes
2. Justify and formulate a preliminary diagnosis.
3. What research methods are needed to clarify the diagnosis?
4. Carry out differential diagnosis.

5. Indicate the principles of treatment of this disease.

Sample answer:

1. Main clinical syndromes: hemorrhagic with hematomatic type of bleeding, articular.

2. Hemophilia, type A, severe form, acute hemarthrosis of the left knee joint, chronic osteoarthrosis of the right knee, both elbow joints; hematuria. The diagnosis was made based on complaints of pain in the left knee joint, medical history, which revealed the presence of a hematoma type of bleeding in the patient, as well as frequent nasal and gingival bleeding, family history data (similar symptoms in a maternal uncle), based on the results of an objective examination - swelling tenderness of the left knee joint, deformation of the knee and elbow joints, taking into account the data of laboratory tests that revealed hematuria.

3. The patient is recommended to: determine APTT, Duke bleeding time, blood clot retraction time, PTT, INR, coagulation factors VII, VIII,
IX. Ultrasound of the knee joint, consultation with an orthopedist to prevent synovitis and contracture of the knee joint.

4. Hemophilia should be differentiated from von Willebrand disease; in this case, there is joint damage, which is characteristic of hemophilia and is very rare in VWD; in addition, VWD is characterized by petechial-spotted or mixed type of bleeding, which was not observed in this patient. It is also possible to differentiate from thrombocytopenia, which is characterized by petechiae and ecchymoses, but not extensive hematomas and joint damage.

5. Carrying out replacement therapy (blood coagulation factors, cryoprecipitate administered intravenously at a dose of 800 units containing coagulation factors), adequate immobilization of the injured limb and pain relief. Subsequently, the patient is prescribed continuous preventive therapy with factor VIII concentrates, and the need to use these drugs at the first signs of bleeding is explained (on-demand therapy).

Task 75.

Patient P., 25 years old, was admitted to the hematology department with complaints of heavy nosebleeds, dizziness, general weakness and shortness of breath with little physical exertion. Considers himself sick from birth: prolonged bleeding from scratches, abrasions (including small ones); frequent heavy nose and gum bleeding; bruises on the body from minor blows or spontaneous. From the age of 2 he was registered with a hematologist. From the age of 11, heavy menstruation lasts 7-10 days. 2 years ago, heavy alveolar bleeding after tooth extraction. Heredity on the maternal side is burdened: hemorrhages were observed in my great-grandfather, grandmother, two uncles, and mother. Objectively: the condition is of moderate severity. Visible mucous membranes and skin are pale. The gums are loose and staining. Breathing in the lungs is vesicular. Heart sounds are rhythmic, 90 per minute. Blood pressure = 130/80 mm Hg. Art. The abdomen is soft and painless. The liver and spleen are not enlarged. Stool and diuresis are not disturbed. In UAC: er. – 2.97×1012/l, Hb – 63.0 g/l, reticulum. – 0.5%, platelet. – 250×109/l, leukocytes. – 6.6×109/l, base. – 1%, eosis – 4%, fallen. – 1%, neutral. s/i – 52%, lymph. – 36%, mon. – 6%, ESR – 29 mm/h. The smear shows anisocytosis, poikilocytosis, hypochromia and microcytosis of erythrocytes. Iron in the blood serum – 5.7 µmol/l, total life-value – 78.3 µmol/l, coef. iron transferrin saturation – 7.28%. Coagulogram: blood clotting time – 6 min 25 sec (N up to 5 min)); Duque bleeding time – 9 minutes (N up to 6 minutes), aPTT – 45.2 seconds (N up to 35 s); PTI – 88%; PTV – 15.6 sec; TV – 16.1 sec; INR – 1.0; fibrinogen – 2.25 g/l; platelet adhesion – 5.9%; platelet aggregation with ADP – 53 sec; platelet aggregation with ristomycin – 35 sec; blood clot retraction – 70%, factor VIII activity – 61%.

Questions:

1. Identify the main clinical syndromes
2. Justify and make a diagnosis
3. Are any additional examinations needed to confirm the diagnosis?
4. Carry out differential diagnosis.
5. Prescribe treatment.

Sample answer:

1. The main clinical syndromes are hemorrhagic syndrome of petechial-hematoma (mixed) type, anemic syndrome.

2. Von Willebrand's disease. Chronic posthemorrhagic iron deficiency anemia, grade III (severe). The diagnosis was made based on the patient's complaints of frequent nasal and gingival bleeding, prolonged bleeding from skin injuries, the presence of frequent spontaneous hematomas, taking into account the medical history (sick since birth, a family history of hemorrhagic syndrome), taking into account the data of an objective study (contact bleeding gums) and laboratory studies that revealed a violation of the vascular-platelet and coagulation components of hemostasis (increased bleeding time; decreased adhesion and ristomycin-platelet aggregation; prolongation of APTT, blood clotting time). The diagnosis of iron deficiency anemia was established on the basis of a decrease in HB to 63 g/l, a decrease in iron content, and an increase in the total blood pressure.

3. Study of the level and activity of von Willebrand factor in the blood.

4. This condition can be differentiated from hemophilia and thrombocytopenia. The presence of a petechial-spotted component of the hemorrhagic syndrome, which does not occur in hemophilia, indicates in favor of BV. Female gender is also extremely rare among patients with hemophilia. The patient has no joint damage; in laboratory studies, along with the prolongation of APTT characteristic of hemophilia, there are disturbances in the platelet component of hemostasis, which also indicates in favor of BV. Clinically, the disease in this patient is similar to thrombocytopenia, the bleeding time is also prolonged, however, the normal platelet count in combination with altered indicators of the coagulation component of hemostasis allows us to exclude thrombocytopenia.

5. Principles of hemostatic therapy: factor VIII concentrates containing von Willebrand factor (immunate, hemoctin SDT, Vilate, octanate, cryoprecipitate).

OPK-10:

Closed type tasks:

Task 1. Instructions: Choose one correct answer.
All of the following can be used to treat PE with a low risk of early death except:
A) thrombolytics;
B) unfractionated heparin;
C) low molecular weight heparins;
D) dabigatran, apixaban, rivaroxaban.
Sample answer: A) thrombolytics.

Task 2. Instructions: Choose one correct answer.
For long-term prevention of recurrent pulmonary embolism, everything can be used except:
A) warfarin;
B) dabigatran, apixaban, rivaroxaban;
C) unfractionated heparin.

*Sample answer:*C) unfractionated heparin.

Task 3. Instructions: Choose one correct answer.
When using warfarin for long-term prevention of recurrent pulmonary embolism, the target INR value should be within:
A) 1.5-2.0;
B) 2.0-2.5;
C) 2.5-3.0;
D) 3.0-3.5.
*Sample answer:*B) 2.0-2.5.

Task 4. Instructions: Choose one correct answer.
The main method of treating mild pulmonary infarction is the use of:
A) antibacterial agents;
B) glucocorticosteroids;
C) cytostatics;
D) anticoagulants;
E) surgical treatment.
*Sample answer:*D) anticoagulants.

Task 5. Instructions: Choose one correct answer.
All drugs are used to treat pneumonia except one:
A) ceftriaxone;
B) amoxicillin;
C) levofloxacin;
D) isoniazid;
E) linezolid.
*Sample answer:*D) isoniazid.

Task 6. Instructions: Choose one correct answer. The main method of treating lung cancer is the use of:
A) antibacterial agents;
B) glucocorticosteroids;
C) cytostatics;
D) anticoagulants;
E) surgical treatment.
*Sample answer:*E) surgical treatment.

Task 7. Instructions: Choose one correct answer. Necrosis of the nasal septum is typical for:
A) idiopathic fibrosing alveolitis;
B) exogenous allergic alveolitis;
C) Wegener's disease;
D) Goodpasture's syndrome;
E) sarcoidosis.
*Sample answer:*C) Wegener's disease.

Task 8. Instructions: Choose one correct answer.
An X-ray of the chest organs reveals dilated lung roots with polycyclic outlines on both sides. No other pathological changes were found. These changes are typical for:
A) idiopathic pulmonary fibrosis;

B) lymphogranulomatosis;
C) central lung cancer;
D) tuberculous bronchoadenitis;
E) sarcoidosis.
*Sample answer:*E) sarcoidosis.

Task 9. Instructions: Choose one correct answer.
A chest x-ray shows a ground-glass appearance.
These changes are typical for:
A) interstitial pneumonia;
B) pneumoconiosis;
C) pulmonary tuberculosis;
D) lung cancer;
E) sarcoidosis.
*Sample answer:*A) interstitial pneumonia.

Task 10. Instructions: Choose one correct answer. The
diagnosis of Wegener's granulomatosis is reliably confirmed:
A) detection of antibodies to the basement membrane in the blood;
B) histological detection of granulomas in tissues and arteries of medium caliber;
C) computed tomography of the chest organs;
D) MRI of the chest;
E) blood chemistry.
*Sample answer:*B) histological detection of granulomas in tissues and arteries of medium caliber.

Task 11. Instructions: Choose one correct answer. The cause of
paradoxical pulsus in pericarditis is:
A) decreased filling of the left ventricle during inspiration;
B) increased filling of the left ventricle during inspiration;
C) addition of atrial fibrillation;
D) decreased filling of the left ventricle during exhalation.
*Sample answer:*A) decreased filling of the left ventricle during inspiration.

Task 12. Instructions: Choose one correct answer.
What is not typical for heart pain in acute fibrinous pericarditis?
A) are permanent, long-lasting and monotonous;
B) weaken when the chest is tilted forward;
C) worsens with deep breathing and coughing;
D) relieved by taking nitroglycerin.
*Sample answer:*D) are relieved by taking nitroglycerin.

Task 13. Instructions: Choose one correct answer.
Inflammatory pericardial syndrome is characterized by all criteria except:
A) pericardial chest pain;
B) pericardial murmurs;
C) the appearance of deep Q, ST elevation and T inversion on the ECG;
D) the appearance or increase of pericardial effusion.
*Sample answer:*C) the appearance of deep Q, ST elevation and T inversion on the

ECG. Task 14. Instructions: Choose one correct answer.

What disease is most often differentiated from constrictive pericarditis?
A) dilated cardiomyopathy;
B) hypertrophic cardiomyopathy;
C) restrictive cardiomyopathy;
D) acute myocardial infarction.
*Sample answer:*C) restrictive cardiomyopathy.

Task 15. Instructions: Choose one correct answer.
What treatment is recommended for a patient with pericardial effusion and developed cardiac tamponade?
A) emergency pericardiocentesis;
B) vasodilators;
C) diuretics;
D) corticosteroids.
*Sample answer:*A) emergency pericardiocentesis.

Task 16. Instructions: Choose one correct answer.
The stage of acute left ventricular failure stage IV according to KILLIP corresponds to:
A) interstitial pulmonary edema;
B) cardiogenic shock;
C) stoppage of blood circulation;
D) alveolar pulmonary edema.
*Sample answer:*B) cardiogenic shock.

Task 17. Instructions: Choose one correct answer. Indications
for the use of morphine are:
A) pulmonary embolism;
B) uncontrollable vomiting;
C) tachycardia;
D) pulmonary edema.
*Sample answer:*D) pulmonary edema.

Task 18. Instructions: Choose one correct answer.
In acute left ventricular failure, preference is given to:
A) furosemide;
B) mannitol;
C) spironolactone;
D) hydrochlorothiazide.
*Sample answer:*A) furosemide.

Task 19. Instructions: Choose one correct answer.
The most common complication of true cardiogenic shock is:
A) ventricular fibrillation;
B) atrioventricular tachycardia;
C) electromechanical dissociation;
D) tachysystolic form of atrial fibrillation.
*Sample answer:*A) ventricular fibrillation.

Task 20. Instructions: Choose one correct answer.
A patient with pulmonary edema that developed against the background of paroxysmal atrial fibrillation is prescribed:

A) placement of temporary cardiac pacing;
B) intravenous administration of nitroglycerin;
C) intravenous administration of metoprolol;
D) electrocardioversion.
*Sample answer:*D) electrocardioversion.

Task 21. Instructions: Choose one correct answer.
When hypertension and coronary artery disease are combined, the following combination of antihypertensive drugs is recommended:
A) prolongeddihydropyridine calcium antagonist and beta-blocker;
B) beta blocker and diuretic;
C) alpha-blocker and calcium antagonist;
D) calcium antagonist and diuretic.
*Sample answer:*A) long-acting dihydropyridine calcium antagonist and beta-blocker.

Task 22. Instructions: Choose one correct answer.
Indications for nephrobiopsy in patients with renal AKI of unknown etiology are all except:
A) the presence of anuria or prolonged oliguria (more than 2-3 weeks);
B) rapidly progressive nephritic syndrome;
C)the presence of severe arterial hypertension and the absence
signshypervolemia (after correction of blood pressure);
D)the presence of a single functioning kidney (congenital or acquired pathology).
*Sample answer:*D) the presence of a single functioning kidney (congenital or acquired pathology).

Task 23. Instructions: Choose one correct answer. A disease with which
Crohn's disease should not be differentiated:
A) ulcerative colitis;
B) irritable bowel syndrome;
C) dysentery;
D) brucellosis;
E) peptic ulcer of the 12th intestine.
*Sample answer:*D) brucellosis.

Task 24. Instructions: Choose one correct answer. Therapist's
tactics for acute cholecystitis:
A) cold on the stomach,
hospitalization; C) a heating pad on
the liver area; C) “blind probing”;
D) choleretic drugs on an outpatient basis.
*Sample answer:*A) cold on the stomach, hospitalization.

Task 25. Instructions: Choose one correct answer.
In the treatment of peptic ulcer associated with Helicobacter, all are used except:
A) omeprazole + clarithromycin + metronidazole
B) omeprazole + clarithromycin + amoxicillin
C) bismuth subcitrate + amoxicillin + metronidazole
D) bismuth subcitrate + amoxicillin + metronidazole + omeprazole/ranitidine

E) antacids + ranitidine + lactobacterin

*Sample answer:*E) antacids + ranitidine + lactobacterin.

Open type tasks:

Exercise 1.

In the postpartum period, mother M., 35 years old, developed severe pain in the chest, severe shortness of breath of a mixed nature with loss of consciousness.

Objectively: the general condition is severe, the skin is cold and moist. Facial cyanosis is noted. NPV up to 30 per minute. On auscultation, breathing in the right half of the chest is sharply weakened, there are single dry rales, and in the lower parts there are silent fine-bubble rales. The neck veins are swollen, the pulse is rhythmic 100 per minute. Blood pressure - 90/60 mm Hg. Art. Heart sounds are muffled, splitting of the second tone above the pulmonary artery. The abdomen is soft and painless.

Complete blood count: erythrocytes - 4.5x1012/l, HB - 135 g/l, ESR - 15 mm/hour, leukocytes - 9.5x1012/l, p - 2%, s - 65%, e - 2%, m - 10%, l - 21%.

Coagulation time - 4 minutes, LDH - 4.2 μmol/h/l.

General urine analysis: straw-yellow color, acidic reaction, beat. weight - 1016, leukocytes - 1-2 in PV, ep. cells - 1-2 in p/z.

Questions:

1. Establish a preliminary diagnosis.

2.Determine the clinical probability of the suspected disease

Bymodified Geneva scale.

3.Assess hemodynamic status. 4.Assess the

risk of early death.

5.Given the hemodynamic status, which test should be immediately performed at the patient's bedside?

6.What result of the study do you expect to obtain?

Sample answer:

1.Preliminary diagnosis:pulmonary embolism, shock, acute respiratory failure.

2.The clinical likelihood of pulmonary embolism is moderate; according to the modified Geneva scale – 5 points (heart rate>95 beats/min).

3.Hemodynamics are unstable. There is obstructive shock. Its criteria are: SBP < 90 mmHg, organ hypoperfusion (impaired mental status, cold, moist skin).

4.The risk of early death is high due to the presence of shock. The PESI index is high – 90 points.

5.Given the hemodynamic instability, echocardiography should be immediately performed at the patient's bedside.

6.As a result of the study, signs of right ventricular dysfunction will be obtained (thrombosis of the right heart, an increase in the diastolic size of the right ventricle, the ratio of the sizes of the right and left ventricles is more than 1, systolic effacement of the interventricular septum).

Task 2.

A 39-year-old woman, M., a day after a long flight, suddenly developed chest pain, severe shortness of breath, and lost consciousness. Regularly takes hormonal contraceptives. Suffers from obesity. Three years ago I suffered thrombophlebitis of my left leg.

Objectively: The general condition is severe, consciousness is present, blue-purple cyanosis of the upper body is noted, the skin is moist, cold, overweight. Breath

superficial up to 32 per minute. On auscultation, breathing is weakened, medium- and fine-bubbling silent rales over the entire surface of the lungs. The neck veins are swollen, the pulse is thready 112 beats per minute, the heart sounds are muffled. Blood pressure 90/40 mm Hg. The abdomen is enlarged and cannot be palpated.

1. Establish a preliminary diagnosis;
2. Specify risk factors and determine the clinical probability of the suspected disease using the modified Geneva scale;
3. Assess hemodynamic status; 4. Assess the risk of early death;
5. Given the hemodynamic status, which test should be immediately performed at the patient's bedside?
6. What result of the study do you expect to obtain? 7. Determine the patient's treatment tactics;
8. If the outcome is favorable, give recommendations for prevention.

Sample answer:

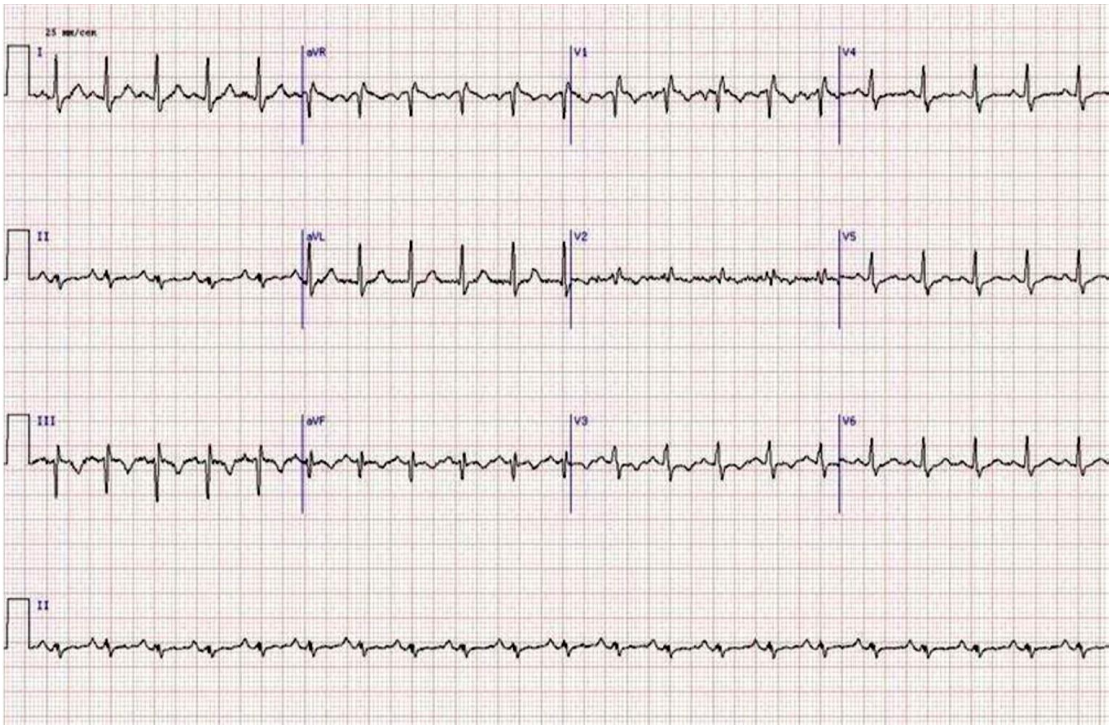
1. Preliminary diagnosis: Pulmonary embolism, shock, acute respiratory failure.
2. The clinical likelihood of pulmonary embolism is moderate; according to the modified Geneva scale – 8 points (heart rate>95 beats/min, history of DVT). Risk factors: obesity, air travel, taking hormonal contraceptives, history of thrombophlebitis of the left leg.
3. Hemodynamics are unstable. There is obstructive shock. Its criteria are: SBP < 90 mmHg, organ hypoperfusion (impaired mental status, cold, moist skin).
4. The risk of early death is high due to the presence of shock. The PESI index is high – 130 points.
5. Given the hemodynamic instability, an echocardiogram should be immediately performed on the patient.
6. As a result of the study, signs of right ventricular dysfunction will be obtained (thrombosis of the right heart, an increase in the diastolic size of the right ventricle, the ratio of the sizes of the right and left ventricles is more than 1, systolic effacement of the interventricular septum).
7. Treatment tactics for the patient: treatment of shock, respiratory failure, thrombolysis or embolectomy.
8. Taking oral anticoagulants (warfarin or DOACs) for a long time (at least 12 months). Cancellation of hormonal contraceptives. Loss of body weight.

Task 3.

Patient T., 35 years old, office manager, was taken by an ambulance team to the emergency department of a city hospital due to a sudden attack of mixed shortness of breath, palpitations, stabbing pain in the precordial area, dizziness and general weakness. The anamnesis noted that 5 days before the attack of shortness of breath, the patient developed mild swelling of the right lower limb from the foot to the inguinal fold, slight cyanosis and moderate pain in the limb. Subsequently, these symptoms persisted, and I tried to treat myself using various antibiotic ointments and alcohol compresses. A real attack of shortness of breath arose for the first time at the end of a long working day against the background of complete well-being.

From the life history it is known that the patient works in an office and spends most of her time in a sitting position, leads a sedentary lifestyle, smokes, and uses combined oral contraceptives.

ECG of patient T., 35 years old



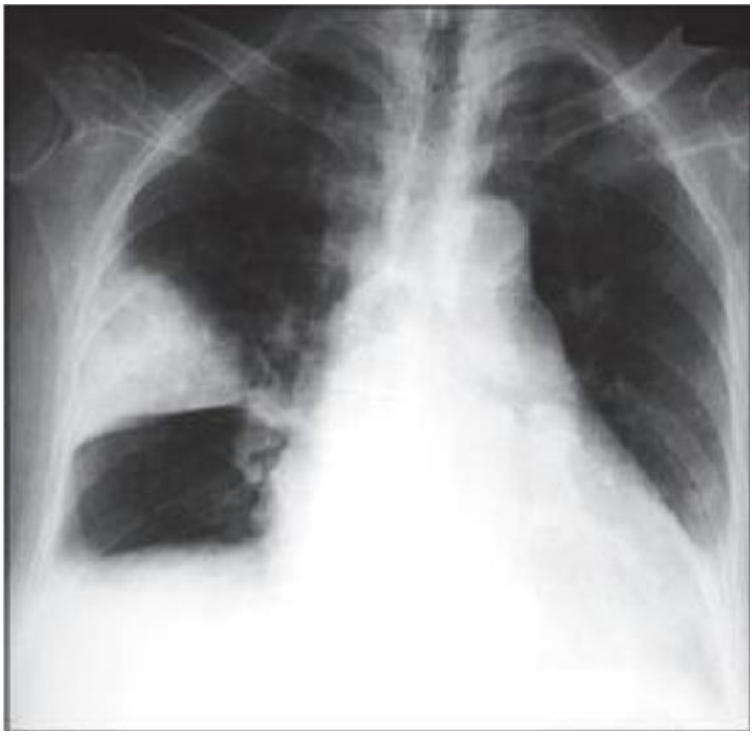
Objectively: the condition is serious. The skin and visible mucous membranes are pale, clean, visible pulsation of the neck veins. There is swelling of the right lower limb, soft and warm to the touch, spreading from the level of the foot to the upper third of the thigh with mild cyanosis, moderate pain on palpation and preserved pulsation in the arteries of the foot, popliteal and common femoral arteries. Joints without pathology. The chest is of the correct shape. Percussion above the lungs is a clear pulmonary sound. Breathing is vesicular, there is no wheezing, respiratory rate is 25 per minute. The pulse is the same on both radial arteries, weak filling, 110 per minute, blood pressure - 90/65 mm Hg. Art. Accent of II tone at the point of listening to the pulmonary valve. There is no noise. The abdomen is symmetrical, soft, painless in all parts on superficial and deep palpation. The liver protrudes from under the costal arch by 1 cm. The effleurage symptom is negative. Body mass index more than 31 kg/m2. Low-grade fever.

Laboratory and instrumental studies revealed the following data: General blood test: hemoglobin - 130 g/l, erythrocytes - 4.1×1012/l, leukocytes - 5.7×109/l, eosinophils - 1%, band neutrophils - 10%, segmented neutrophils - 50%, lymphocytes - 35%, monocytes - 4%; ESR - 24 mm/h.

General urine analysis: straw-yellow, transparent, acidic pH, specific gravity - 1010, epithelium - 2-4 in the field of view, red blood cells, casts, salts are not detected.

Biochemical blood test: total bilirubin - 12.8 μmol/l, creatinine - 0.093 mmol/l, glucose - 6.9 mmol/l, cholesterol - 6.2 mmol/l, potassium - 3.7 mmol/l, total protein - 75 g/l, fibrinogen – 8.2 g/l, CRP – 25 mg/l.

X-ray of the chest organs of patient T., 35 years old



1. Identify the syndromes, determine the leading one;
2. Interpret the presented electrocardiogram;
3. Formulate a diagnosis;
4. Make a plan for additional examinations;
5. Prescribe treatment.

Sample answer:

1. Respiratory failure syndrome, acute pulmonary heart syndrome, chest pain syndrome, venous insufficiency syndrome, intoxication syndrome. The leading one is acute pulmonary heart syndrome.
2. Sinus rhythm, tachycardia, acute overload of the right heart, symptom SI-QIII-TIII, incomplete block of the right bundle branch.
3. Acute thrombosis of the common femoral vein on the right. Massive pulmonary embolism. Acute cor pulmonale.
4. Examination plan:

-X-ray of the chest organs.
-D-dimer.
-Troponins T and I.
-Echo-cardiography.
-Color duplex scanning of the veins of the lower extremities and pelvis.
-Computed tomography of the chest organs.
-Coronary angiography.

5. Carrying out systemic drug thrombolysis (Streptokinase 250,000 IU as a loading dose in 30 minutes, then 100,000 IU/h for 12-24 hours, or Alteplase 100 mg IV for 2 hours), anticoagulant therapy (Unfractionated heparin - 5000 -10,000 units intravenously, then a constant infusion of 10-15 units/kg/min – 5-7 days or low molecular weight Heparin – fraxiparin 0.1 ml per 10 kg of body weight for 10 days; Warfarin – 5 days before stopping Heparin; under INR control, for 6-12 months).

An alternative to the combination of parenteral anticoagulants with Warfarin are: Rivaroxaban 15 mg 2 times a day - 3 weeks, then 20 mg / day or Apixaban 10 mg 2 times a day

day – 7 days, then 5 mg 2 times a day. Inotropes (Dobutamine 5-20 mcg/kg/min or Dopamine 5-30 mcg/kg/min IV infusion), oxygen inhalation (6-8 liters/min), elastic compression of the lower extremities, in the subacute period of physiotherapy, administration of NSAIDs , phlebotonics. If there is a floating thrombus in the lumen of the vein, install a removable vena cava filter.

Task 4.

Patient A., 52 years old, 3 days after appendectomy. When trying to get out of bed, shortness of breath, a dry cough, pressing pain along the entire front surface of the chest, severe general weakness suddenly appeared, and a day later hemoptysis developed.

Objectively: moderate condition, cyanosis, swelling of the neck veins. In the lungs there is vesicular breathing, no wheezing. The respiratory rate is 36 per minute. Heart sounds are muffled, the rhythm is correct, the emphasis of the 2nd tone is on the pulmonary artery.

ECG: rightogram, deep S wave in lead I, Q wave in lead III, depth 1/3 of the R wave and duration 0.02 seconds. ST segment depression and negative T waves in leads V1–V3, high P waves in standard leads.

1.Make the most likely diagnosis;

2.What research methods are needed in this case; 3.What

treatment should be prescribed for this patient;

4.What diseases should a differential diagnosis be made?

Sample answer:

1.Preliminary diagnosis: Postoperative pulmonary embolism. 2.Examination plan: general

blood and urine analysis; biochemical blood test: general

protein, protein fractions, bilirubin, aminotransferases, total and fractional LDH, seromucoid, fibrin; Dynamic ECG; X-ray examination of the lungs; ventilation-perfusion scanning of the lungs, study of coagulogram and D-dimer in blood plasma; Echocardiography; selective angiopulmonography, instrumental diagnosis of phlebothrombosis of the lower extremities.

3.Thrombolytic therapy: recombinant tissue plasminogen activator, heparin therapy up to 30,000 units per day, constant oxygen therapy through a nasal catheter (in some cases artificial ventilation), 3-5 days before discontinuation of Heparin, Warfarin, Sincumar are prescribed, for shock - Dobutamine, for heart attack - pneumonia - antibiotics (Penicillin is undesirable), pain relief. Catheter and surgical embolectomies. Installation of vena cava filters. Antiplatelet agents.

4.Differential diagnosis should be carried out with the following diseases: myocardial infarction, dissecting aortic aneurysm, lobar pneumonia, pneumothorax, acute pericarditis.

Task 5.

Woman A., 44 years old, manager, came to the clinic with complaints of attacks of suffocation and shortness of breath after physical activity and appearing spontaneously at night, as well as chest discomfort.

History of the disease: the patient first became ill after severe pneumonia 11 years ago. Then attacks of suffocation recurred after physical exertion and during colds, which were relieved by inhalation of Salbutamol (3-4 times a day). The patient suffered community-acquired bilateral bronchopneumonia and acute appendicitis. He denies the presence of allergic diseases in himself and his relatives. There were no blood transfusions. There are no bad habits.

Objectively: the condition is satisfactory, consciousness is clear. The skin and mucous membranes are clean physiological in color. Tongue is wet. Lymph nodes are not enlarged. On percussion of the lungs - a boxy sound; on auscultation - hard breathing, dry rales throughout

pulmonary fields, whistling during forced exhalation. The respiratory rate is 19 per minute. The boundaries of the heart are not changed. Heart sounds are muffled and rhythmic. Blood pressure - 135/90 mm Hg. Art. Pulse – 67 beats per minute, good filling and tension. The abdomen is soft and painless. The liver and spleen are not enlarged. Stool and urine output are normal.

Complete blood count: hemoglobin – 123 g/l, erythrocytes – 3.8×1012/l, leukocytes – 8.9×109/l, band neutrophils – 3%, segmented neutrophils – 63%, eosinophils – 5%, monocytes – 6%, lymphocytes – 13%; ESR - 19 mm/h.

Biochemical blood test: total bilirubin - 5.3 μm/l; total protein - 82 g/l, urea - 4.7 mmol/l.

General urine analysis: specific gravity - 1028, protein - negative, epithelium - 1-3 in the field of view. Sputum analysis: mucous, odorless. Under microscopy: leukocytes - 5-6 in the field of view,

eosinophils - 10-12 per field of view, bronchial epithelial cells, single alveolar macrophages. BK (Koch bacilli) - negative. (3 times).

X-ray of the chest organs: increased transparency of the lung fields, flattening and low standing of the diaphragm. The pulmonary pattern is enhanced. The roots of the lungs are enlarged, the shadow is intensified. The heart shadow is increased in diameter.

1.Suggest a probable diagnosis; 2. Justify the preliminary diagnosis; 3.Draw up a plan for additional examination; 4. Make a differential diagnosis;

5.Draw up a treatment plan (name the necessary groups of medications).

Sample answer:

1.Preliminary diagnosis: Bronchial asthma, moderate, insufficiently controlled course. DN 0.

2.The diagnosis was made on the basis of the patient's complaints of attacks of suffocation, shortness of breath after physical exertion that occur spontaneously at night, and discomfort in the chest; life history (attacks recur after physical activity and during colds; attacks of suffocation were relieved by inhalation of Salbutamol (3-4 times a day)); objective examination data (percussion - box sound in the lungs, auscultation - hard breathing, dry rales over the lung fields, whistling during forced exhalation); data from laboratory methods (in sputum: eosinophils - 10-12 per field of view, leukocytes - 5-6 per field of view); data from instrumental research methods (increased transparency of the pulmonary fields, enhanced pulmonary pattern, enlarged roots of the lungs).

3.Examination plan: A) Study of external respiratory function: spirometry (determination of forced expiratory volume in 1 second - $FEV_1$and forcedvital capacity of the lungs - FVC). B) Test with a bronchodilator (test for reversibility of bronchial obstruction). C) Allergy examination (skin tests, determination of specific IgE in blood serum, inhalation provocation tests with allergens). D) Chest X-ray (to exclude an alternative diagnosis).

4.Chronic obstructive pulmonary disease is characterized by long-term previous smoking or the presence of other risk factors, a slow increase in respiratory symptoms, constant or intermittent coughing during the day, progressive shortness of breath, the presence of irreversible bronchial obstruction, and rarely sputum eosinophilia. Starts in middle age.

5.Therapy:

A) Diet: table No. 15.

B) Inhaled glucocorticosteroids in low doses in combination with long-acting beta2-agonists.

Alternative: inhaled corticosteroids in medium or high doses or inhaled corticosteroids in low doses in combination with antileukotriene receptors.

C) Inhaled β2 - rapid-acting agonists when needed or a combination of inhaled glucocorticosteroids in low doses in combination with Formoterol.

Task 6.

Patient S., 34 years old, turned to her local physician with complaints of frequent attacks of suffocation over the last month, which are accompanied by wheezing, a cough audible at a distance, with the release of a small amount of viscous sputum, after which relief occurs. Similar conditions have been bothering me for about 2 years, and have not been examined.

The patient has a history of allergic rhinitis. The deterioration of the condition is associated with the transition to a new job in the library. Over the past month, symptoms have occurred daily, at night 3 times a week, and interfere with activity and sleep.

Objectively: general condition is satisfactory. Normosthenic physique. The skin is pale pink, there are no rashes. There is no peripheral edema. Breathing over the lungs is harsh, scattered dry wheezing sounds are heard. NPV - 18 per minute. Heart sounds are clear, the rhythm is correct, heart rate is 72 beats per minute. Blood pressure – 120/80 mm Hg. Art. The abdomen is soft and painless on palpation.

Complete blood count: erythrocytes - 4.2×1012/l, hemoglobin - 123 g/l, leukocytes - 4.8×109/l, eosinophils - 16%, segmented neutrophils - 66%, lymphocytes - 18%, monocytes - 2 %, ESR - 10 mm/h.

General analysis of sputum: mucous membrane, leukocytes - 5-7 in the field of view, squamous epithelium - 7-10 in the field of view, detritus in a small amount, Kurschmann spirals.

X-ray of the chest organs: no infiltrative shadows in the lungs are detected. Diaphragm, heart shadow, sinuses without features.

Spirometry test. Originaldata: vital capacity - 82%, FEV_1 - 62%, FVC - 75%. 15 minutes after inhalation of 800 mcg of Salbutamol: FEV1 - 78%.

1.Formulate a diagnosis. Justify the severity of the disease; 2. How is a test with a bronchodilator performed? Evaluate the results; 3.What studies need to be done to confirm the diagnosis? 4. Prescribe treatment.

5. Are there indications for prescribing inhaled glucocorticoids in this case?

Sample answer:

1.Bronchial asthma, mixed, persistent, moderate severity, exacerbation. The severity of asthma (persistent, moderate) is determined based on the number of daytime attacks (daily), night symptoms (3 times a week).

2.Spirometry using a rapid-acting inhaled bronchodilator. The criterion for the reversibility of bronchial obstruction is the increase in $FEV_1 \geq 15\%$. Thisthe patient's obstruction is reversible.

3.Spirometry, assessment of allergological status, chest radiography.

4.A) Patient education. B) Environmental control. C) We start drug treatment from stage 3. To quickly relieve symptoms, short-acting inhaled bronchodilators are used: Salbutamol, Fenoterol or the combination drug Berodual (Fenoterol + Ipratropium bromide). To control bronchial asthma - low doses of inhaled glucocorticosteroids + long-acting β2-agonist.

5.Yes, this patient has indications for inhaled glucocorticoids. In this case, one should remember about local undesirable effects: oropharyngeal candidiasis, dysphonia, cough due to irritation of the upper respiratory tract.

Prevention: use of inhalerswith spacers, rinsing the mouth and throat with water, followed by spitting after inhalation.

Systemic side effects depend on the dose: suppression of the adrenal cortex, tendency to bruise, decreased bone mineral density.

Task 7.

Patient B., 62 years old, at an appointment with a therapist, complains of general weakness, increased fatigue, cough with the release of a small amount of mucous sputum, shortness of breath with slight physical exertion (climbing to the 1st floor, walking at a moderate pace).

The severity of symptoms according to the COPD Assessment Test (CAT) was 28 points.

Smokes 1 pack of cigarettes per day for 35 years, smoker index = 35 pack/years. For many years I have been bothered by a cough with phlegm in the morning. Sometimes low-grade fever. 3 years ago, gradually increasing shortness of breath and swelling in the legs appeared. When shortness of breath increased, Berodual was used. In recent years, exacerbations due to colds have become more frequent, up to 3 times a year. Last year, he was hospitalized once with an exacerbation.

Objectively: hypersthenic physique, increased nutrition. BMI – 28 kg/m2. Severe diffuse cyanosis. The chest is of normal configuration. On percussion there is a pulmonary sound, in the lower parts with a boxy tint. Breathing is harsh, with prolonged exhalation, scattered dry wheezing. NPV – 24 per minute. The borders of the heart are expanded to the right, the accent is 2 tones above the pulmonary artery. Heart rate – 85 beats per minute. Blood pressure - 130/80 mm Hg. The neck veins swell when lying down. The liver is palpated 2 cm below the edge of the costal arch. Swelling of the lower extremities is noted.

General blood test: erythrocytes – 4.6·109/l, Hb – 166 g/l, leukocytes – 6.2·109/l (leukocyte formula – without features), ESR – 14 mm/h.

Spirometry: FEV_1=30.0% of the required value, FEV1/FVC=0.6. Pulse oximetry: SaO2=87%.

ECG - signs of hypertrophy of the right ventricle and right atrium.

Results of a chest x-ray: the pulmonary pattern is strengthened and deformed. The roots are deformed and compacted.

1.Suggest the most likely diagnosis; 2. Justify the

diagnosis; 3. Prescribe therapy.

Sample answer:

1.Preliminary diagnosis: Chronic obstructive pulmonary disease, III severity of bronchial obstruction, stable course with severe symptoms (CAT-28) and frequent exacerbations.

Complications: Respiratory failure stage II. Chronic pulmonary heart, decompensated. CHF IIA, FC III.

2.The diagnosis of COPD was established based on the patient's complaints of cough with sputum production and shortness of breath that occurs with minor physical activity (climbing to the 1st floor, walking at a moderate pace), the presence of a risk factor in the medical history (smoking 1 pack of cigarettes per day for 35 years, smoker index = 35 pack/years), signs of bronchial obstruction (dry wheezing, decreased FEV_1/FVC <0.7 and decreased FEV_1), radiographic data. The degree of bronchial obstruction was determined based on spirometry data (FEV_1=30% of duevalues). Stable course of the underlying disease with severe symptoms

determined according to the COPD Assessment Test - SAT 28 points with frequent exacerbations (up to 3 times a year).

The diagnosis of CHF, decompensation and the stage of chronic heart failure were made based on ECG data and clinical signs of right ventricular failure (enlarged liver, edema of the lower extremities, swelling of the neck veins).

The degree of respiratory failure was determined based on the severity of shortness of breath (with minor physical exertion) and pulse oximetry data.

3.Non-pharmacological measures: 1) smoking cessation, 2) pulmonary rehabilitation (physical training, nutritional support), 3) oxygen therapy and respiratory support (if necessary). B. Vaccination against influenza and coronavirus infections, anti-pneumococcal vaccination to reduce the risk of exacerbations of COPD.

Since the patient belongs to group D according to the GOLD classification, taking into account the severity of symptoms and frequent exacerbations of the disease, the patient is prescribed one of the treatment options:

1)combination therapy with inhaled glucocorticosteroids (ICS) and long-acting beta$_2$-agonists (LABA) (Fluticasone 500 mcg/Salmeterol 50mcg or Budesonide 320 mcg/Formoterol 9 mcg – 2 inhalations per day);

2)long-acting anticholinergic drugs (Tiotropium bromide 18 mcg 1 inhalation per day),

3)combination therapy: ICS/LABA + M-cholinergic receptor blocker: formoterol/budesonide (Fluticasone 500 mcg/Salmeterol 50 mcg or Budesonide 320 mcg/Formoterol 9 mcg – 2 inhalations per day) + Tiotropium bromide (18 mcg once a day, inhalation). In the future, with improvement in lung function (FEV1> 50% of predicted) and without repeated exacerbations, gradual withdrawal of ICS with a stepwise reduction in its dose is recommended over 3 months.

An alternative therapy is a combination of ICS + LABA (Fluticasone 500 mcg/Salmeterol 50 mcg or Budesonide 320 mcg/Formoterol 9 mcg - 2 inhalations per day) with a phosphodiesterase-4 inhibitor (Roflumilast tablets 0.5 mg once a day). Or a combination of long-acting anticholinergic drugs (Tiotropium bromide 18 mcg 1 inhalation per day) with a phosphodiesterase-4 inhibitor (Roflumilast tablets 0.5 mg 1 time per day).

Short-acting beta-agonist bronchodilators (eg, Formoterol 12 mcg, inhaled) or anticholinergics (eg, Ipratropium bromide 40 mcg, inhaled) may be prescribed as required.

For the treatment of chronic heart failure and cor pulmonale, the following should be prescribed: 1) a dihydropyridine calcium channel blocker - Amlodipine, starting at 2.5 mg per day, gradually increasing the dosage to 10 mg per day, depending on the tolerability of the drug and the occurrence of side effects (edema of the lower extremities and hypotension), 2) ACE inhibitor - Lisinopril 2.5 - 5 mg 1 time per day or angiotensin II receptor blocker - Candesartan 8 mg/day under blood pressure control, 3) beta-blockers - Nebivolol 1.25 mg 1 time per day in the morning under control of heart rate and blood pressure, 4) diuretics - Torsemide 2.5-5 mg in the morning under control of blood pressure, 5) aldosterone antagonists - Spironolactone 25-50 mg in the morning.

Task 8.

Man S., 70 years old, consulted a physician with complaints of a cough with a small amount of difficult-to-discharge mucopurulent sputum, shortness of breath with slight physical exertion, and an increase in body temperature to 37.4°C, which appeared after hypothermia.

Cough with sputum has been noted for 10 years. Exacerbations of the disease 3-4 times a year in the autumn-winter period. About 2 years ago, shortness of breath appeared during physical exertion, and sputum began to come out with difficulty. The patient has been smoking 1 pack per day for 30 years.

On examination: the face is puffy, there is warm cyanosis, swelling of the neck veins on exhalation. The chest is barrel-shaped. Above the pulmonary fields there is a percussion sound with a box-like tint. Breathing is uniformly weakened, dry wheezing sounds are heard on both sides. NPV - 24 per minute. The heart sounds are muffled, the emphasis of the 2nd tone is on the pulmonary artery, a diastolic murmur is heard there, the rhythm is correct. Heart rate - 90 beats per minute. Blood pressure - 130/80 mm Hg. Art. The abdomen is soft and painless. The liver and spleen are not palpable. There is no peripheral edema.

Complete blood count: hemoglobin - 165 g/l, leukocytes - 9.2×109/l, eosinophils - 1%, neutrophils - 73%, lymphocytes - 26%, ESR - 29 mm/h.

Results of chest x-ray: pulmonary fields of increased transparency, pulmonary pattern is strengthened, deformed, vascular pattern is strengthened in the center and depleted in the periphery, the roots of the lungs are expanded, bulging of the pulmonary artery trunk. No infiltrative changes were detected.

ECG: signs of right ventricular hypertrophy.

Spirometry data: decrease in vital capacity - up to 80%, FEV_1 – 29% of the required values.

1.Formulate a probable diagnosis;

2.What additional studies need to be performed to confirm the diagnosis?

3.Prescribe treatment;

4.Criteria for prescribing antibacterial therapy for this disease; 5. Determine the indications for hospitalization.

Sample answer:

1.Preliminary diagnosis: Chronic obstructive pulmonary disease, IV degree of bronchial obstruction, extremely severe course, exacerbation stage.

Complications: Respiratory failure II degree Chronic cor pulmonale, decompensated. CHF IIA, FC III.

2.Additional research methods necessary to confirm the diagnosis: EchoCS, blood gas composition, pulse oximetry, bronchodilator test, cytological and microbiological examination of sputum, fibrobronchoscopy.

3.Non-drug treatments for COPD include smoking cessation, which is one of the effective methods to reduce the progression of the disease, as well as pulmonary rehabilitation (physical training, nutritional support), oxygen therapy and respiratory support. Annual vaccination against coronavirus and pneumococcal infections, influenza to reduce the risk of exacerbations of COPD.

For the treatment of broncho-obstructive syndrome, bronchodilator therapy through a nebulizer is recommended - combined bronchodilators M-cholinergic blockers (Iptratropium bromide) + ß2-adrenergic agonists (Fenoterol) - for example, Berodual 50/21 mcg in the form of 1-2 inhalations 3 times a day.

To relieve exacerbations of COPD, usually caused by microbial microflora, antibiotics are indicated. Taking into account the most common pathogens and an uncomplicated allergic history - Amoxiclav (Amoxicillin 1000 mg/clavulanic acid 200 mg) 1.2 g IV 3 times a day for 5-14 days.

Expectorants and mucolytics (Acetylcysteine 100mg, 2 tablets 2-3 times a day, Bromhexine 8 mg 4 times a day).

Low-flow oxygen therapy 16 hours a day.

As a basic therapy, it is recommended to prescribe long-acting M-cholinergic receptor blockers - Tiotropium bromide 18 mcg in the morning, by inhalation. Since COPD is extremely severe, it is necessary to prescribe a combination drug including ICS/LABA - Formoterol/Budesonide 160 mcg/4.5 mcg/dose - 1-2 inhalations 2 times a day.

For the treatment of chronic heart failure and pulmonary heart disease, the following should be prescribed: 1) a calcium channel blocker of the dihydropyridine series - Amlodipine, starting with 2.5 mg per day, gradually increasing the dosage to a maximum of 20 mg per day, depending on the tolerability of the drug and the occurrence of side effects (edema of the lower limbs and hypotension), 2) ACE inhibitor - Lisinopril 2.5 mg 1 time per day or Perindopril 2.5 mg 1 time under blood pressure control, 3) beta-blockers - Nebivolol 1.25 mg 1 time per day in the morning under heart rate control and blood pressure, 4) diuretics - Torsemide 2.5-5 mg in the morning under blood pressure control, 5) aldosterone antagonists - Spironolactone 25-50 mg in the morning.

4.The indication for antibiotic therapy in patients with COPD is the infectious nature of the exacerbation: increased shortness of breath, increased cough or increased amount of sputum and purulent nature of the sputum.

5.Indications for hospitalization of the patient are:

- significant increase in the intensity of symptoms;
- extremely severe COPD;
- the occurrence of acute or exacerbation of chronic concomitant pathology;
- patient's age;
- the occurrence of decompensation of the pulmonary heart.

Task 9.

Patient A., 48 years old, when visiting a therapist, complains of daily attacks of shortness of breath, wheezing, coughing, lasting several hours, relieved by 3-4 inhalations of Salbutamol or IV administration of Euphyllin and Prednisolone. Wakes up 1-2 times at night due to attacks of shortness of breath. This condition persists stably for 2 months.

I fell ill 10 years ago in the winter; respiratory discomfort and wheezing appeared against the background of an acute respiratory disease. The diagnosis was made: Chronic bronchitis with an asthmatic component. I took Salbutamol, Fenoterol. For several years, symptoms were observed only during the cold season, with colds, inhalation of cold air, and changes in weather. 2-3 years ago, attacks of shortness of breath appeared in the autumn and spring against the background of flowering plants, as well as inhalation of library and house dust. The attacks became more severe and more difficult to treat. Shortness of breath appeared between attacks of the disease. Constantly takes Montelukast (10 mg/day), Beclomethasone inhalations (800 mcg/day), Salbutamol (8-10 inhalations/day). Periodically stops attacks with IV aminophylline and Prednisolone.

Objectively: The general condition is of moderate severity. NPV - 22 per minute. The chest is regular in shape and symmetrical. Percussion tone over the lungs with a boxy tint. Vesicular breathing, scattered dry wheezing on both sides. Heart sounds are rhythmic and clear. Heart rate - 96 beats per minute. Blood pressure - 135/80 mm Hg. No pathology was detected from other organs and systems.

Results of chest x-ray: pulmonary fields of increased transparency. Focal and infiltrative changes are not determined. Sinuses are free. The mediastinal shadow is of normal shape and size. The abdomen is soft, painless, the liver is at the edge of the costal arch, elastic, painless. The spleen is not palpable. The kidneys are not palpable, the effleurage symptom is negative on both sides. Physiological functions are not impaired. There is no peripheral edema.

Spirometry: Vital vital capacity - 74%, FEV_1 - 45%, FEV1/FVC - 65% of the required values. Salbutamol test: Δ FEV1 = 13%.

ECG: the electrical axis is deviated to the right, sinus rhythm, 80 beats per minute. The amplitude of the P waves in standard leads II and III is increased. In the chest leads, the transition zone is shifted to the left.

General sputum analysis: mucous; microscopy reveals single eosinophils and neutrophils in the field of view.

General blood test: leukocytes - 8x109/l, erythrocytes - 5.0x1012/l, hemoglobin - 150 g/l, ESR - 3 mm/h.

1.Formulate a preliminary diagnosis; 2.

Prescribe medication.

Sample answer:

1) Diagnosis: Bronchialasthma, mixed form, severe, uncontrolled. Complications: Respiratory failure stage II. Chronic cor pulmonale
compensated. CHF I, FC II.

2)Taking into account the severe uncontrolled course of bronchial asthma, the patient is recommended to have high doses of combined ICS/LABA + M-cholinergic receptor blocker (Formoterol/ Budesonide 320 mcg / 9 mcg 2 inhalations 2 times a day + Tiotropium bromide 18 mcg once a day in the morning (using a liquid inhaler)).

For the treatment of chronic heart failure and cor pulmonale, the following should be prescribed: 1) a calcium channel blocker of the dihydropyridine series - Amlodipine, starting from 2.5-5 mg per day, depending on the tolerability of the drug and the occurrence of side effects (edema of the lower extremities and hypotension), 2) ACE inhibitor - Perindopril 2.5 mg 1 time under blood pressure control, 3) aldosterone antagonists - Spironolactone 25-50 mg in the morning.

If inhalation therapy is insufficiently effective, Prednisolone should be prescribed in tablet form at a dose of 40-50 mg per day for 5-7 days.

Task 10.

A 28-year-old patient complains of shortness of breath, severe pain in the heart for 2 days, weakness, increased temperature to 38.30C.

The patient associates the disease with pneumonia suffered 10 days ago. Objectively: sitting with the body tilted forward, pale skin, cyanosis of the lips. In the lungs - vesicular breathing, respiratory rate 24/min. The borders of the heart are not expanded, the tones are muffled, in the III-IV intercostal space on the left near the edge of the sternum there is a murmur of a soft timbre in systole and diastole. Heart rate 96/min. Blood pressure 110/70 mm Hg. Liver +1 cm, leukemia in the blood. 11.2 x109/l, ESR
- 38 mm/h.

1. Specify the most likely diagnosis;
2. What auscultatory phenomenon is typical for this disease in the patient?
3. Which diagnostic method should be performed first?
4. What signs of the suspected disease would you expect to obtain using this method?
5. Prescribe treatment.

Sample answer:

1. Acute fibrinous pericarditis of unknown etiology, probably viral. 2. Pericardial friction noise
3. ECG.
4. Concordant ST segment elevation in most standard, reinforced unipolar limb and chest leads. Formation of negative T waves in the same leads.
5. First-line drugs used for the treatment of acute pericarditis are NSAIDs and, above all, ipobrufen (300-600 mg 2-3 times a day) in combination with small doses of colchicine (0.5 mg 1 time per day for weight less than 70 kg) for 3 months.

Task 11.

A 42-year-old patient complains of severe weakness, dizziness, shortness of breath at the slightest physical exertion. About 2 weeks ago, I was on sick leave for 3 days with a diagnosis of acute respiratory viral infection. 5 days ago it increased again

the temperature reached low-grade levels, then constant pain in the chest of moderate intensity appeared, relieved by standing upright and taking analgin. For the last 2 days the pain has not bothered me, but there has been a feeling of heaviness in the right hypochondrium, pasty feet and legs. This morning, on the advice of my mother-in-law, I took 2 Furosemide tablets and excreted about 1.5 liters of urine. The condition worsened sharply, shortness of breath intensified, and when trying to stand up there was a short-term loss of consciousness. An emergency medical team was called.

On examination the condition is moderate. Conscious. Lies low. The shins are pasty. There is vesicular breathing in the lungs, no wheezing. The respiratory rate is 22 per minute, the neck veins are swollen. The apex beat is not detected. Heart sounds are muffled, heart rate is 128 per minute. The rhythm is correct, blood pressure is 110/70 mm Hg. Art., with usual figures - 130/80 mm Hg. Art. During inspiration, the systolic pressure decreases by 15 mmHg. Art. Liver + 4 cm, sensitive to palpation.

The ECG shows sinus tachycardia.The amplitude of the ventricular complex in all leads is reduced, the T wave in all leads is smoothed.

1. Give the most likely diagnosis.
2. What research methods are needed in this case? 3.What treatment should be prescribed to this patient?
4. What diseases should a differential diagnosis be made? 5.What symptoms are mandatory for this disease?

Sample answer:

1. Acute exudative pericarditis. Cardiac tamponade. NC stage IIB.
2. General blood and urine analysis. Biochemical blood test: total protein, protein fractions, seromucoid, fibrinogen, CRP, AST, ALT, ASL-O. X-ray examination of the chest. ECG. ECHOCG. Diagnostic puncture of the pericardium. 85
3. Antibacterial therapy (cephalosporins), immunosuppressive therapy (Prednisolone 20-30 mg/day). Treatment of circulatory failure: diuretics, angiotensin-converting enzyme inhibitors. Pericardial puncture with fluid removal.
4. IHD, myocardial infarction; myocarditis, liver cirrhosis.
5. Heartache. Shortness of breath, which decreases when bending the body forward. A dry cough appears, sometimes vomiting due to the pressure of the exudate on the trachea, bronchi and phrenic nerve. Symptoms of cardiac tamponade: significant expansion of the heart shadow, a sharp increase in venous pressure (swelling of the neck veins, especially noticeable in a horizontal position), a decrease in blood pressure, the appearance of paradoxical pulsus.

Task 12.

A 25-year-old patient consulted his local doctor with complaints of pressing pain in the heart area, lasting for 2 days, worsening with breathing and lying in bed on his back, increased body temperature to 38 °C, chills, sweating, and weakness.

About 2 weeks ago, before the above-described complaints appeared after hypothermia, a cough and runny nose appeared, I did not see a doctor, I was working.

The patient's condition is moderate. The skin and visible mucous membranes are of normal color, the pharynx is clean, there is no hyperemia, the tonsils are not enlarged. Peripheral lymph nodes are not enlarged. Breathing through the nose is free. BH -20 per minute. When percussing the lungs, there is a clear pulmonary sound. Auscultation reveals vesicular breathing, no wheezing.

The heart area is not changed. The right border of the heart is at the right edge of the sternum, the left border is 1.5 cm medially from the midclavicular line, the upper border is the third intercostal space. The heart sounds are clear, in the fourth intercostal space on the left along the parasternal line a “scraping” noise is heard in a limited area, which intensifies with inspiration and when pressed with a stethoscope. Pulse - 128 per minute, the rhythm is correct. Blood pressure - 90/60 mm Hg. Belly is soft

painless on palpation. The liver is not enlarged, the spleen is not palpable. There is no swelling.

1.Formulate and justify a preliminary diagnosis. 2.Draw up a plan for examining the patient.

3.What results do you expect to confirm the diagnosis? 4.Make a treatment plan.

5.What is the prognosis of the disease?

Sample answer:

1.Acute fibrinous pericarditis. Characteristic in this case is the connection of the disease with hypothermia, the prolonged nature of pain in the heart associated with the act of breathing and changes in body position. Common symptoms include fever, chills, and sweating. A pathognomonic sign is a pericardial friction noise, which is characterized by limited localization, a "scraping" sound, lack of irradiation, amplification at the height of inspiration and when pressing the chest with a stethoscope.

2.Complete blood count, biochemical blood test (CPK, CPK MB, LDH, troponin), ECG, EchoCG, chest x-ray.

In the blood test, leukocytosis, a shift to the left, and accelerated ESR are possible. Blood enzyme tests are performed to exclude myocardial damage.

On the ECG, given the early stage of the disease, there will likely be concordant ST segment elevation in the main leads, possibly the precordial leads. There are no radiological or echocardiographic signs of acute and dry pericarditis.

3.Hospitalization of the patient. Prescription of NSAIDs + colchicine, if there is no effect - prednisolone.

4.Recovery. Transformation into acute exudative or constrictive pericarditis is possible.

Task 13.

A 42-year-old patient was admitted to the hospital with complaints of shortness of breath on exertion and at rest, palpitations, weakness that occurs with little physical activity, decreased ability to work, heaviness in the right hypochondrium, and weight loss.

At the age of 30, he was treated for pulmonary tuberculosis. He considers himself sick for about a year, when shortness of breath and palpitations began to appear during physical activity. Over the past 2 months, my health has worsened and my shortness of breath has increased. Concerns about rapid fatigue and a significant decrease in working capacity. Treatment with cardiac glycosides and diuretics had no effect.

Objectively: low nutrition, pale, cyanosis of lips and ears. The number of respirations is 24 per minute at rest, 30 per minute - with little physical activity (5 squats). Swelling of the neck veins. In the lungs there is a percussion - pulmonary sound, vesicular breathing, no wheezing. The heart area is not changed. The right border of the heart is at the left edge of the sternum, the left border is 2 cm medially from the midclavicular line, the upper border is the lower border of the 3rd rib along the parasternal line. Heart sounds are muffled. Pulse - 108 per minute. The rhythm is correct. HELL

- 110/75 mmHg The abdomen is soft, sensitive to palpation in the right hypochondrium. The liver protrudes 5 cm from under the edge of the costal arch. The spleen is not palpable. There is no peripheral edema.

Blood test: Hb - 120 g/l, leukocytes - 8.8x109/l, band cells - 3%, segmented cells -73%, lymphocytes - 15%, eosinophils - 2%, monocytes - 3%, ESR - 35 mm/h.

Urinalysis: relative density - 1015, leukocytes - 2-3 per field of view. Biochemical blood test: total protein - 65 g/l, bilirubin - 20 mmol/l, cholesterol

- 4.5 mmol/l, urea - 8.8 mmol/l, creatinine - 127 mmol/l, potassium - 4.5 mEq/l.

Ultrasound of the abdominal organs: the right lobe of the liver is enlarged by 5 cm, diffusely heterogeneous structure, moderate dilatation of the portal vein, the spleen is not enlarged, a small amount of fluid in the abdominal cavity.

X-ray of the chest organs: the pulmonary fields are transparent, there are multiple petrifecates in the hilar zones, Gohn's lesions on the right, interlobar scars on the right. The borders of the heart are within normal limits; along the right contour of the cardiac shadow, ring-shaped calcification of the cardiac membrane and decreased pulsation are determined.

ECG: sinus rhythm, double-humped widened P waves, reduced QRS amplitude, negative waves in leads II, III, aVF, V1-V3.

EchoCG: thickening, fusion, pericardial calcification, left ventricular diastolic dysfunction.

1.Suggest the most likely diagnosis; 2.What was the
cause of this disease? 3. Patient management tactics;
4. Indications for surgical treatment.

Sample answer:

1. Constrictive pericarditis.
2.Pulmonary tuberculosis.
3. Consultation with a surgeon to decide on pericardiectomy. 4. Indication for surgery - signs of circulatory and venous blood flow disorders.

Task 14.

An 18-year-old patient was admitted to the cardiology department with complaints of shortness of breath with slight physical exertion and at rest, a feeling of heaviness and pressure behind the sternum, palpitations, pain in the knee and ankle joints, an increase in body temperature to 38.5 °C, hoarseness of voice, cough.

From the anamnesis it is known that about a month ago she suffered from a sore throat. After 2 weeks, pain appeared in the knee and ankle joints, and the body temperature increased. Deterioration in health over the last 5 days, when the above complaints appeared and were of an increasing nature.

The patient's condition is serious. Orthopnea position. Cyanosis of lips, neck, fingers. Swelling of the neck veins. Redness, swelling and limited mobility in the knee and ankle joints. On the inner surface of the legs there is ring-shaped erythema. Lymph nodes are not

increased. There is no peripheral edema. The chest is conical in shape. The number of respirations is 28 per minute. On percussion there is a clear pulmonary sound, on auscultation there is vesicular breathing, no wheezing.

There is a bulging of the chest in the area of the heart and smoothness of the intercostal spaces. The boundaries of relative dullness of the heart: right - 3 cm outward from the right edge of the sternum, left - along the anterior axillary line, upper - at the level of the second rib. The apical impulse is determined in the fourth intercostal space along the anterior axillary line.

On auscultation: heart sounds are muffled. Pulse - 128 per minute, low filling, rhythmic. Blood pressure - 80/50 mm Hg. The abdomen is of normal shape, soft, painless on palpation. With deep palpation, the sigmoid colon is determined, mobile, painless.

The liver protrudes 3 cm from under the costal arch, its edge is rounded and sensitive to palpation. The kidney area is not changed. Pasternatsky's symptom is negative. The spleen is not enlarged.

X-ray of the chest organs: the pulmonary fields are transparent, without focal and infiltrative changes. Expansion of the size of the heart shadow in all directions,

especially up and to the right. The cardiac arches are not differentiated, the vascular bundle is shortened, and the pulsation is sharply weakened.

ECG: QRS voltage is sharply reduced, negative wave in leads I, II, III, V2-V6. Blood test: Hb - 125 g/l, erythrocytes - 4x1012/l, leukocytes - 10.8x109/l,

stab - 5%, segmented - 68%, lymphocytes - 20%, eosinophils - 2%, monocytes - 5%, ESR - 42 mm/h, CRP - sharply positive, antistreptolysin-O titer - 1250 U, antihyaluronidase titer - 865 U .

Urinalysis: relative density - 1018, acidic reaction, leukocytes - 2-3 in the field of view.

1. formulate a clinical diagnosis; 2.

Justify the diagnosis;

3.What other examination methods need to be carried out to clarify the diagnosis?

4.What complications of this disease can be observed in the patient?

5.What are the treatment tactics?

Sample answer:

1.Diagnosis: rheumatism, active phase.III degree of activity. Rheumatic polyarthritis. Acute exudative pericarditis. Cardiac tamponade.

A history of sore throat, polyarthritis, ring-shaped erythema, increased ESR, high titer of anti-streptococcal antibodies, increased CRP allows a diagnosis of high-grade rheumatism, rheumatic polyarthritis.

Acute exudative pericarditis was established on the basis of the patient's complaints and objective examination, indicating an expansion of the borders of the heart. Confirmation is provided by X-ray data and characteristic changes on the ECG.

Cough, hoarseness, increasing shortness of breath, tachycardia, hypotension, swollen neck veins, and muffled heart sounds suggest cardiac tamponade.

2.EchoCG, Signs of tamponade: early diastolic collapse of the right ventricle (RV), late diastolic collapse of the right atrium (RA), abnormal movement of the interventricular septum, increased respiratory variability (> 25%) of mitral flow velocity, respiratory variability of ventricular volumes, flow velocity into the aorta (visualization of paradoxical pulsus EchoCG) and overflow of the inferior vena cava.

3.Bed rest, diet with limited salt and liquid. If tamponade is present, pericardiocentesis is performed. Treatment of the underlying disease: penicillin antibiotics, corticosteroids, NSAIDs, colchicine.

If there is no effect from the therapy within 2 weeks and a large volume of effusion persists, pericardiocentesis with the introduction of corticosteroids into the cavity of the heart sac is indicated.

Task 15.

Patient M., 72 years old, retired, consulted a local general practitioner with complaints of headaches, dizziness, tinnitus, and increased blood pressure to 210/120 mm Hg. Art.

Medical history: high blood pressure numbers appeared 2 years ago, he took Metoprolol, Hypothiazide, but it was not possible to achieve a significant reduction in blood pressure. For six months he has noticed fatigue when walking, pain in the legs that force him to stop (when walking less than 200 meters). Hospitalized to clarify the cause and select drug therapy.

Objectively: the condition is satisfactory. There is no swelling. Over the entire surface of the lungs there is a pulmonary sound from percussion; on auscultation there is vesicular breathing, no wheezing. The heart area is visually unchanged.

Borders of the heart: right -1 cm outward from the right edge of the sternum, upper - II rib, left - 1.5 cm outward from the left SCL in the 5th intercostal space. Apex impulse in the 5th intercostal space,

outwards from the SCL, spilled. Heart sounds are muffled and rhythmic. Emphasis of the second tone over the aorta, systolic murmur in the aorta without conduction to the vessels of the neck. Pulse - 76 beats per minute, rhythmic. The vascular wall outside the pulse wave is dense. Blood pressure - 195/115 mm Hg. Art. The abdomen is soft and painless. Liver along the edge of the costal arch. A systolic murmur is heard over the abdominal aorta. The symptom of effleurage is negative. Reduced pulsation in the arteries of the rear of both feet.

The following data were obtained from laboratory and instrumental studies. General blood test: hemoglobin - 145 g/l, erythrocytes - 4.5 × 1012/l, leukocytes - 7.9×109/l, ESR - 12 mm/hour, color index - 1.0.

General urine analysis: specific gravity - 1020, protein - 0033 g/l, leukocytes - units. in the field of view, single hyaline cylinders.

Biochemical blood test: sugar - 5.2 mmol/l (3.5-6.1), cholesterol - 7.2 mmol/l (4.0), urea - 9.0 mmol/l (2.4-8 .3), creatinine - 0.13 μmol/l (0.014-0.44), potassium - 5.4 mmol/l (3.4-5.3), sodium - 135 mmol/l (130-156).

Isotope renography: moderate decrease in the secretory and excretory functions of the right kidney.

Fundus examination: retinal vascular angiopathy.

ECHO-CG: RV - 2.1 cm (normal - 2.3), IVS - 1.25 cm (normal - 1.0 cm), LVAD - 1.25 cm (normal - 1.0 cm), LVAD - 5.8 cm (normal - 5.5), LVED - 3.7 cm (normal - 3.5). Ejection fraction - 54% (normal - 60-80%). Calcification of the mitral and aortic valves.

1. Identify the leading syndromes (explain the pathophysiological mechanisms of their occurrence);
2. Make a differential diagnostic series; 3.Formulate and justify the diagnosis;
4. Draw up an examination plan to clarify the diagnosis;
5. Make a treatment plan.

Sample answer:

1. Syndrome:
- arterial hypertension;
- cardiomegaly syndrome, predominantly of the left side;
- intermittent claudication syndrome.

2. The differential diagnosis plan must include isolated systolic hypertension (for the elderly), hypertension, and renovascular hypertension. Common signs of arterial hypertension (increased blood pressure, tinnitus, dizziness), elevated blood pressure numbers.

However, for isolated systolic hypertension, diastolic pressure numbers should be within normal limits. An increase in systolic blood pressure in old age is associated with an increase in peripheral vascular resistance (the vascular wall becomes “hard”, the elasticity of the vascular wall is reduced).

Hypertension is characterized by an earlier onset (45-50 years), and a long history of arterial hypertension. For renovascular hypertension - older age, persistent increase in blood pressure, vascular murmurs, increased plasma cholesterol levels.

3. Atherosclerosis of the aorta, renal vessels. Vasorenal hypertension. Intermittent claudication, grade 2A ischemia. The main diagnostic signs: the patient’s age (72 years), monotonously high hypertension, the presence of vascular murmurs (signs of aortic atherosclerosis: accent of the second tone over the aorta, systolic murmur of the abdominal aorta, increased plasma cholesterol levels), pain, fatigue in the legs when walking up to 200 meters , forcing the patient to stop, reducing pulsation in the arteries of the dorsum of the feet.

4. Additional examination:

If possible, determination of plasma renin (from the renal veins);

Rehberg test (to determine kidney function); Ultrasound of the kidneys;

Excretory urography (to identify a delay in the nephrographic effect);

Lipidogram;

Contrast aortography with angiography of the renal arteries (to detect the presence of renal artery stenosis).

5.Treatment plan:

-diet with limited animal fats and salt (table No. 10);

-statins (stabilization of atherosclerotic plaques, hypocholesteremicaction);

-Norvasc 10 mg 1 time per day in the morning (vasodilation, nephroprotective properties);

-small doses of diuretics: Indapamide 1.25 mg (thiazide-like diuretic with a vasodilating effect);

-aspirin, prevention of thrombosis in blood vessels.

Active detection of signs of coronary atherosclerosis (coronary angiography) and atherosclerosis of the BCA (CDS). Consultation with a vascular surgeon for diagnosis and determination of indications for surgical treatment (nephrectomy, or reconstructive surgery on the renal vessels - removal of atherosclerotic plaques from the renal arteries, or angioplasty).

Task 16.

The patient is 45 years old. Complaints of shortness of breath at rest, worsening when lying down. For 15 years, arterial hypertension up to 210/100 mm Hg. Art., suffered a myocardial infarction 3 years ago. He receives enalapril 10 mg 2 times a day, Concor 5 mg, aspirin.

Objectively: acrocyanosis. Orthopnea, RR - 36 per minute. In the lungs there are moist fine bubbling rales in the lower sections. Heart sounds are muffled, systolic murmur at the apex, carried to the axillary region, gallop rhythm. Pulse - 110 per minute, rhythmic, intense. Blood pressure - 230/140 mm Hg. Art. The liver protrudes 5 cm from under the edge of the costal arch. Swelling of the legs.

The ECG shows sinus tachycardia, cicatricial changes in the anterior septal region. EchoCG – aorta 3.5 cm; left atrium 5.5 cm; CDR 7 cm; DAC 5.5 cm; IVS 1.4 cm; LVSD 1.4 cm. RV 4 cm. Aortic, mitral, tricuspid valves are not changed. Regurgitation on the mitral and tricuspid valves, grade 3. Extensive zone of akinesis of the anterior wall. The estimated pressure in the right ventricle is 50 mmHg.

1.Evaluate auscultatory data;

2.Evaluate the results of EchoCG;

3.What stage of heart failure does the patient have?

4.What does a pressure in the right ventricle of 50 mm Hg indicate?

Sample answer:

1.Mitral regurgitation murmur

2.Dilatation of the left and right sections, left ventricular hypertrophy, relative mitral and tricuspid regurgitation, pulmonary hypertension, anterior wall akinesis

3. IB

4.About pulmonary hypertension

Task 17.

A 30-year-old man presented with chest pain that occurs when walking and at rest, difficult to relieve with nitroglycerin, and short-term loss of consciousness during physical activity. Ill for 6 months.

Objectively: There is vesicular breathing in the lungs. The boundaries of relative cardiac dullness are not expanded. The sounds are rhythmic, systolic murmur with a separation from 1 tone at the apex, systolic murmur on the aorta, not carried out on the carotid arteries. Blood pressure - 110/70 mm Hg. Art. Pulse - 80 per minute, rhythmic. The liver is not enlarged. There is no swelling.

ECG – sinus rhythm, EOS deviation. to the left. Left ventricular hypertrophy. A deep Q wave is recorded in I, avL, V5-6.

1. Assess the auscultatory picture. 2.What is the possible cause of ECG changes? 3.What is the differential series?

4.What research is needed?

5.What is the possible cause of loss of consciousness?

Sample answer:

1.Auscultatory data are characteristic of IGSS.

2.A deep Q wave may reflect hypertrophy of the interventricular septum. 3. Aortic stenosis, mitral insufficiency, mitral valve prolapse. 4.EchoCG.

5.Obstruction of the left ventricular outflow tract.

Task 18.

Patient 30 years old. Complaints of shortness of breath with little physical activity. Frequent bronchitis in childhood.

Objectively: cyanosis of the lips. In the lungs, breathing is vesicular. Pulsation of the neck veins. The sounds are rhythmic, systolic murmur in the 2nd intercostal space to the left of the sternum, splitting of the 2nd tone on the pulmonary artery. Heart rate 80/min. Blood pressure 100/70 mmHg. The liver protrudes 3 cm from under the edge of the costal arch. Swelling of the legs. ECG – sinus rhythm, vertical position of e.o.s. Incomplete blockade of the right bundle branch.

X-ray of the chest organs - pulmonary hypervolemia. 1. Assess the auscultatory picture;

2.What is the differential series?

*3.*What do hepatomegaly and edema indicate?

4.What research is needed for diagnosis? Sample answer:

1.The murmur of relative pulmonary artery stenosis in ASD, splitting of 2 tones is associated with volume overload of the right ventricle in ASD.

2.Pulmonary artery stenosis, VSD.

3.About right ventricular failure. 4.EchoCG.

Task 19.

A 66-year-old patient has been suffering from attacks of angina pectoris during moderate physical activity for 4 years. Since that time he has known about arterial hypertension. I did not receive regular therapy. In the morning I woke up due to a sharp burning pain in the chest that was not relieved by nitroglycerin. I called an emergency doctor 2 hours after the onset of the pain syndrome, when the burning pain behind the sternum intensified, began to radiate to the left arm and shortness of breath and interruptions in heart function appeared.

On examination, the condition is moderate, shortness of breath at rest. The skin is covered with sticky sweat, cold to the touch, acrocyanosis. Pulse - 92 per minute, arrhythmic, 5-6 extrasystoles per minute, blood pressure - 160/90 mm Hg. Art. Heart sounds are dull, accent 2 tones above the pulmonary artery. The respiratory rate is 28 per minute. Moist rales are heard in the lower parts of the lungs. The liver is at the edge of the costal arch, there is no peripheral edema. The patient was urgently hospitalized in the intensive care unit.

On the ECG: sinus rhythm, in leads $V_{1\text{-}4}$ - ST segment elevation 3 mm above the isoline, single polytopic ventricular extrasystole with a complete compensatory pause. Leukocytosis - 10,000. Troponin - 16 µmol/l.

1. Your presumptive diagnosis;

2. Criteria for the main diagnosis;

3. What complications of the underlying disease do you expect?

4. Additional examination methods;

5. Treatment tactics, choice of drugs.

Sample answer:

1. Myocardial infarction of the anterior wall of the left ventricle, acute stage.

Ventricular extrasystole 3 (Lown, Wolf). OSSN according to Killip II.

2. The criteria for myocardial infarction are the presence of biomarkers of cardiomyocyte necrosis in combination with at least one of the following signs:

symptoms of ischemia;

episodes of ST segment elevation on the ECG or new complete blockade of the left bundle branch.

A patient with a previous history of coronary heart disease or exertional angina develops a clinical picture of acute coronary syndrome as a primary coronary event. The ECG shows reliable signs of myocardial damage to the anterior wall of the left ventricle, including the apex, and markers of myocardial necrosis.

3. Ventricular extrasystole grade 3 (Lown, Wolf). In conditions of electrical instability of the myocardium in a patient in the acute period of myocardial infarction, ventricular extrasystole of high gradations is a trigger of life-threatening ventricular arrhythmias.

Heart failure of functional class II (Killip) - the patient has shortness of breath, acrocyanosis, and moist rales in the lower parts of the lungs.

4. Emergency coronary angiography. Continuous

monitoring of ECG, blood pressure, blood pressure.

Emergency echocardiography with Doppler

sonography. Chest X-ray.

Markers of myocardial damage in dynamics.

Blood CBS in dynamics.

Blood creatinine, glucose, lipid spectrum.

5. Main treatment objectives:

-relief of pain syndrome;

-inhibition of the process of thrombus formation in the coronary artery;

- restoration of blood flow through the coronary artery and prevention of its rethrombosis; hemodynamic and neurohumoral unloading of the heart.

To relieve pain in a patient with developing pulmonary edema, slow intravenous administration of morphine 2-4 mg is preferable.

Oxygen inhalation (at a rate of 2-8 liters per minute) - with persistent myocardial ischemia and obvious congestion in the lungs.

To treat pulmonary edema, administer loop diuretics (Furasemide).

Beta blockers are lipophilicindicated for all patients with ACS and signs of left ventricular dysfunction (reducing patient mortality, limiting the infarction zone, reducing the frequency of arrhythmias, reducing the frequency of myocardial ruptures).

Aspirin is indicated for all patients with ACS, initial dose 150-300 mg (without enteric coating), then 75-100 mg/s (IA).

P2Y12 platelet receptor inhibitors (Ticagrelol, Prasugrel, Clopidogrel) should be prescribed to all patients with ACS in addition to Aspirin, as early as possible, in the absence of contraindications (high risk of bleeding). The duration of combined treatment is 12 months. Ticagrelol (180 mg initial dose, 90 mg twice daily maintenance dose) is recommended for all patients at moderate to high risk of coronary events (eg, high troponin levels).

The use of anticoagulants is recommended for all patients in addition to antiplatelet therapy (iv administration of Heparin).

Patients with elevation MISTs presenting to a hospital with PCI capability should undergo PCI within 90 minutes of first contact with a healthcare provider: angioplasty and stenting of the infarct-associated coronary artery. If coronary intervention cannot be performed within 120 minutes from the first contact with a medical professional, thrombolysis followed by coronary angiography is indicated: immediately in case of ineffective thrombolysis and within 3-24 hours in case of effective thrombolysis with angioplasty and stenting of the infarction-associated artery, if functionally significant stenosis persists.

Task 20.

Patient A., 57 years old, a store salesperson, was hospitalized on December 11, 2019 with complaints of intense burning pain throughout the chest for 7.5 hours, radiating to the left shoulder, neck, lower jaw, elbow, and also complained for sweating, palpitations, weakness, shortness of breath at rest, cough.

Anamnesisdiseases: height - 178 cm, weight - 105 kg. I do not smoke. My father suffered a myocardial infarction at the age of 49. Since the age of 35, the patient has noted an increase in blood pressure to 180/100 mm Hg. Art. She has been examined and takes Perindopril 10 mg at night and Metoprolol succinate 100 mg in the morning. In 2016, she noted a condition characterized by loss of motor activity in the right upper limb for 3 hours, then spontaneously motor function was restored. The patient has been suffering from type 2 diabetes mellitus since 2004 and takes Metformin 1000 mg/day. Uses a glucometer, blood sugar is within 9.5 mmol/l. Since May 2019, she has been experiencing attacks of pressing pain in the chest during physical activity (walking on level ground up to 600 meters) lasting up to 5 minutes, which were relieved after stopping walking. She was treated on an outpatient and inpatient basis, diagnosed with coronary heart disease, and was additionally prescribed Acetylsalicylic acid 75 mg/day, Rosuvastatin 10 mg/day, and short-acting nitrates as needed. In August 2019, a planned coronary angiography was performed, revealing an isolated lesion of the anterior descending (AD) coronary artery - 95% stenosis in the middle third. Due to the severity of the lesion, stenting of the LAD stenosis with a drug-eluting stent was immediately performed. After discharge, the patient was recommended to continue taking therapy, including Aspirin, Metoprolol succinate, Perindopril, Rosuvastatin and Metformin, as well as Clopidogrel 75 mg/day for one year. Two days before the real deterioration, the patient stopped taking Clopidogrel, justifying this by bleeding gums. The deterioration of the condition in the form of the appearance of intense pain in the chest at rest appeared at 06-00. The patient independently took 4 tablets of Nitroglycerin without effect and at 12-00 after the appearance of shortness of breath and weakness, she sought medical help. Called emergency medical services (EMS).

When examined by an EMS doctor, the condition is serious due to pain in the chest, shortness of breath, hypotension (BP - 100/60, heart rate - 98 per minute). An electrocardiogram (ECG) was recorded. The patient was taken to the emergency department with unrelieved pain.

Objectively: the condition is severe due to pain in the chest, shortness of breath, and hypotension.

On examination, the skin is marbled, cold, and distinctly moist. Shortness of breath persists at rest, the respiratory rate is up to 28 per minute, the patient takes a forced half-sitting position. Auscultation reveals moist fine bubbling rales over all pulmonary fields. The pulse on the radial arteries is markedly weakened, thread-like, 120 beats per minute. Auscultation in the region of the heart weakens the first sound, tachycardia up to 120 per minute, a systolic murmur is heard at the apex. Blood pressure on

right upper limb - 80/50 mm Hg. Art., on the left upper limb - 75/50 mm Hg. Art. There is no swelling in the lower extremities.

According to the ECG in the emergency department, there was no dynamics, compared to the SMP film. Additional examination methods. General blood test: hemoglobin - 139 g/l, leukocytes – 11×109/l, erythrocytes – 4.8×1012/l, ESR – 8 mm/hour.

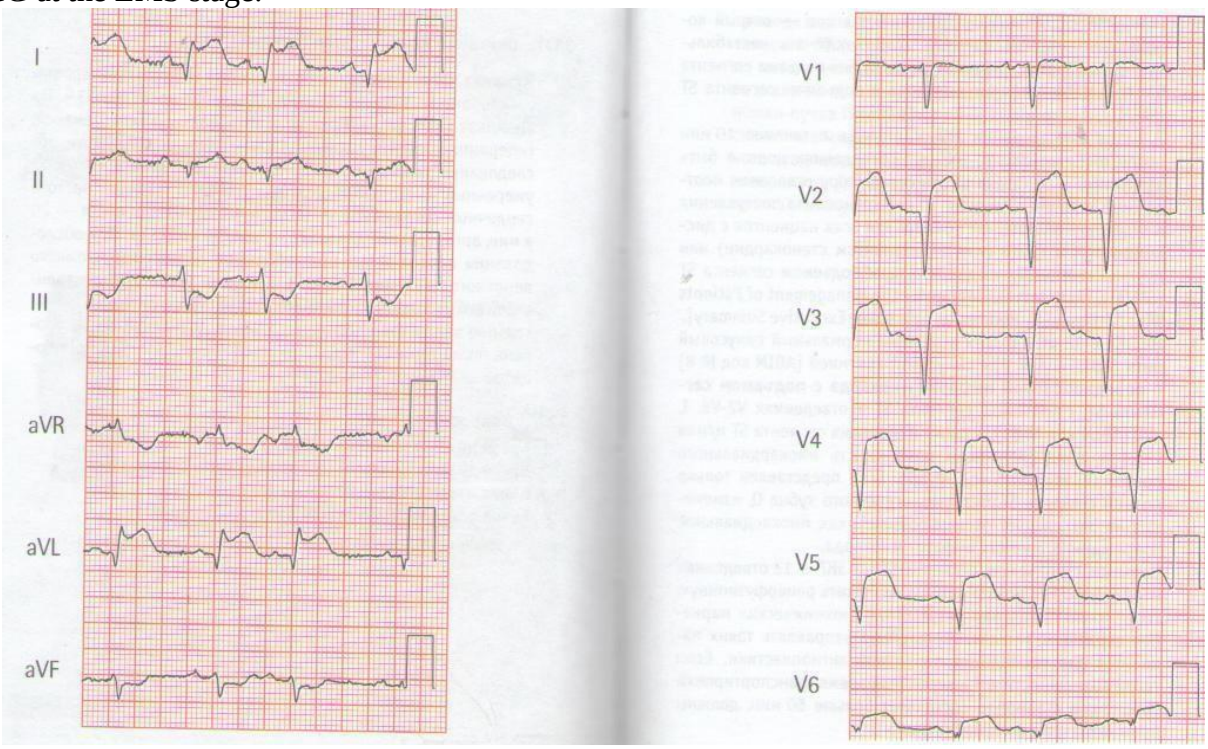
Biochemical blood test: sugar - 22 mmol/l, creatine kinase total fraction - 1900 U/l, creatine kinase-MB fraction - 102 U/l, troponin T - 2.9 ng/ml; total cholesterol – 6.2 mmol/l, low-density lipoprotein cholesterol – 4.1 mmol/l; Blood pH is 7.2.

According to echocardiography, the left ventricular ejection fraction is 38%, severe mitral-papillary dysfunction, regurgitation at the mitral valve III, left ventricular myocardial hypertrophy. According to invasive hemodynamic measurements, central venous pressure is 260 mmH2O. Art. (N - 90-110 mm water column).

Pulmonary capillary wedge pressure is 23 mm Hg. Art. (N - 10-18 mm Hg).
Cardiac index – 1.9 l/min/m2 (N - 2.5-4.5 l/min/m2).

Saturation – 69% (N - 80-100).

X-ray shows stage III venous congestion in the lungs, the heart shadow is expanded to the left.
ECG at the EMS stage.



1. Identify the syndromes, determine the leading one; 2.Formulate a diagnosis;
3. Justify your diagnosis; 4.Draw up a plan for additional examinations; 5. Prescribe treatment.

Sample answer:

1.Syndromes:

-painful angina or acute coronary syndrome (status anginosus);

- heart failure (acute) - shortness of breath, wheezing, tachycardia, hypotension, marbling and coldness of the skin;

-hypoxic encephalopathy (dizziness);

-hyperglycemic (diabetes mellitus). The leading one is acute coronary syndrome.

2. Main diagnosis: IHD. Myocardial infarction, Q-non-forming, anterior widespread (with ST segment elevation), complicated by acute mitral-papillary dysfunction, pulmonary edema, cardiogenic shock, Killip IV OSHF.

Planned percutaneous coronary intervention with LAD stenting in August 2014.

Background: Stage III hypertension, uncontrolled hypertension, risk 4 (very high). Transient ischemic attack in 2016. Dyslipidemia, left ventricular hypertrophy, obesity.

Diabetes mellitus type 2, decompensation.

3. Based on the clinical picture (anginal pain in the chest for 7.5 hours, not relieved by Nitroglycerin), ECG signs of subepicardial damage to the myocardium of the anterior wall of the left ventricle, and an increase in the concentration of the marker of myocardial necrosis - CPK-MB - myocardial infarction was diagnosed.

Signs of OSHF: cardiogenic shock - persistent hypotension, peripheral hypoperfusion (pallor of the skin, weak pulse), incipient pulmonary edema (tachypnea, moist rales in the subscapular areas).

4. Examination plan:

-detailed general blood test with determination of hematocrit and platelets;

- blood glucose, lipid profile;

- cardiac markers (CK-MB, CK, troponins);

- acid-base state (pH, pCO2, dE);

- urine test for ketone bodies (degree of diabetes compensation);

- blood for potassium, sodium, creatinine, urea to assess kidney damage in cardiogenic shock;

- blood for AST, ALT, bilirubin to assess liver damage;

-coagulogram;

-glycemic profile (compensation for type 2 diabetes mellitus);

-EchoCG;

- X-ray examination of the chest organs.

5. Narcotic analgesics (morphine) IV, oxygen therapy, inotropic support (Dopamine, Norepinephrine), including mechanical (ECMO, intra-aortic balloon counterpulsation), anticoagulants (Heparin), antiplatelet agents (Aspirin + Ticagrelol for 1 year), statins (Rosuvastatin), diuretics (Furasemide). Perform urgent PCI of all affected arteries. If PCI is not possible, perform thrombolytic therapy.

Task 21.

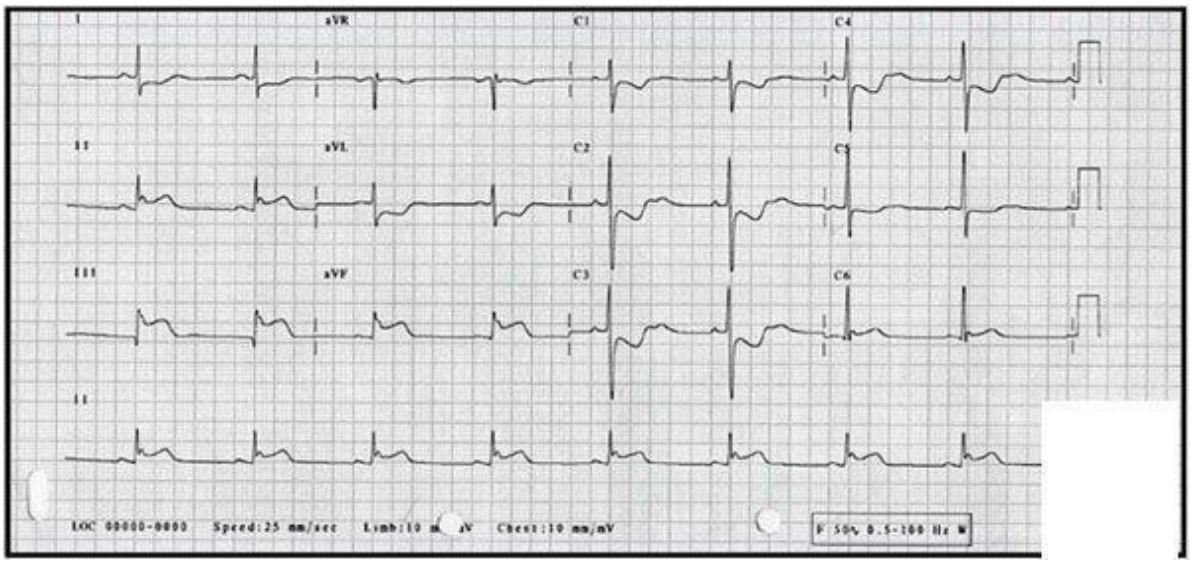
Patient I., 62 years old, university teacher. Today, while at rest, about 3 hours ago, for no apparent reason, shortness of breath of a mixed nature appeared and began to increase. The patient is hospitalized.

History of the disease: he has been suffering from hypertension for about 5 years.
Takes antihypertensive drugs irregularly.

Objectively: upon admission, the condition was of moderate severity, orthopnea, pale skin, acrocyanosis. The respiratory rate is 26 per minute. On auscultation, moist fine bubbling rales are heard over all parts of the lungs. Percussion, the borders of the heart are expanded to the left, the pulse on the radial artery is 100 per minute, rhythmic, heart sounds are muffled, rhythmic, heart rate - 100 per minute, blood pressure - 130/90 mm Hg. Art. The abdomen is soft, painless, the size of the liver according to Kurlov is 9×8×7 cm.

Soon after admission, the patient's condition sharply worsened: a productive cough appeared, shortness of breath intensified, and the number of moist rales over all pulmonary fields increased.

ECG



1. Identify the syndromes, determine the leading one (explain the pathophysiological mechanism of its occurrence);
2. Formulate a diagnosis;
3. Draw up an examination plan to clarify the diagnosis;
4. Decide your treatment plan.

Sample answer:

1. Syndromes: acute left ventricular failure, arterial hypertension; electrocardiographic syndrome of acute subepicardial injury. The leading syndrome is acute left ventricular failure, the basis of which is a decrease in systolic function due to acute damage to the left ventricular myocardium.
2. Main diagnosis: IHD: posterior inferior myocardial infarction, atypical (asthmatic) onset, complicated by pulmonary edema. OSSN according to Killip III. Background: Hypertension stage III. Risk 4 (very high).
3. Examination plan: general blood test, general urine test, determination of electrolytes (K, Na) in the blood, glycemia, creatinine (with GFR calculation), chest radiography, echocardiography, coronary angiography.
4. Treatment plan: narcotic analgesics (Morphine IV), oxygen therapy, loop diuretics (Lasix (Furasemide) IV), if a horizontal position is tolerated - according to emergency indications, perform percutaneous coronary intervention on the infarct-related artery; if PCI is not possible - perform thrombolytic therapy (Streptokinase or Alteplase). Indirect anticoagulants (Heparin), dual antiplatelet therapy for 1 year (Aspirin + Clopidogrel / Ticagrelor), beta-blocker (bisoprolol or metoprolol), ACE inhibitor (perindopril or ramipril), high-dose statin (Atorvastatin 80 mg/day) .

Task 22.

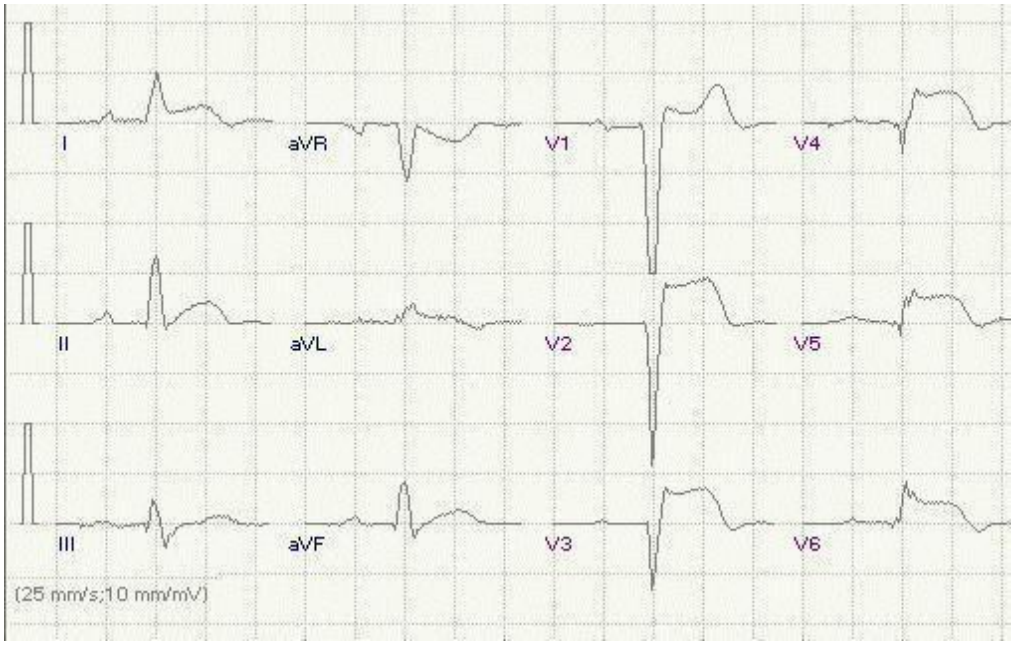
A 52-year-old patient, a driver, was brought to the emergency room by ambulance with complaints of sharp pressing pain in the chest, radiating to both arms and the left shoulder blade, lasting more than 4 hours. The pain is not relieved by taking Nitroglycerin and injection analgesics, and is accompanied by severe weakness, fear of death, and severe sweating.

From the anamnesis it was revealed that the patient had been bothered for about 10 years by paroxysmal headaches, tinnitus, dizziness, “flickering spots” before the eyes, short-term stabbing pains in the heart area, without irradiation. An increase in blood pressure to 160/100 mm Hg was often noted. Art., sometimes – up to 200/120 mm Hg. Art. He was examined on an outpatient basis 3 years ago - a diagnosis of hypertension was established, he did not adhere to these recommendations, and did not take the prescribed therapy.

Objectively: the skin is pale, acrocyanosis. RR - 26 per minute, shallow breathing. Percussion reveals a clear pulmonary sound over all pulmonary fields; upon auscultation, harsh breathing, a large number of moist rales in the subscapular areas. The pulse is the same in both hands, rhythmic, weak filling and tension. Heart rate - 120 per minute, blood pressure - 80/60 mm Hg. Art. Heart sounds are dull, rhythmic; the accent of the second tone is not determined. The abdomen is soft, painless, the liver is not enlarged. There is no swelling of the lower extremities.

In the analyses: CPK-MB - 98

U/l. ECG



1. Formulate a diagnosis;
2. Justify your diagnosis; 3. Draw up a plan for additional examinations; 4. Prescribe treatment.

Sample answer:

1. Main diagnosis: IHD: myocardial infarction, anterior widespread, complicated by cardiogenic shock, interstitial pulmonary edema. OSSN according to Killip IV.

Background: Stage III hypertension, uncontrolled hypertension, risk 4 (very high).

2. Based on the clinical picture (anginal pain in the chest for 4 hours, not relieved by Nitroglycerin), ECG signs of subepicardial damage to the myocardium of the anterior wall of the left ventricle, and an increase in the concentration of the marker of myocardial necrosis - CPK-MB - myocardial infarction was diagnosed. Signs of cardiogenic shock are persistent hypotension, peripheral hypoperfusion (pallor of the skin, weak pulse), incipient pulmonary edema (tachypnea, moist rales in the subscapular areas).

3. Examination plan: general blood test, general urinalysis, biochemical blood test (troponin T or I, Glucose, creatinine with calculation of GFR, K, Na), acid-base balance, dynamic ECG, coronary angiography, echocardiography, chest radiography, central hemodynamic monitoring (installation of a Swan-Hans catheter).

4. Treatment plan:narcotic analgesics (Morphine) IV, oxygen therapy, inotropic support (Dopamine, Norepinephrine), including mechanical (ECMO, intra-aortic balloon counterpulsation), anticoagulants (Heparin), antiplatelet agents (Aspirin + Ticagrelol), statins (Rosuvastitin), diuretics (Furasemide) . Perform urgent PCI of all affected arteries. If PCI is not possible, perform thrombolytic therapy.

Task 23.

Patient T., 48 years old, was admitted to the department with complaints of severe pain behind the sternum, radiating to both arms, under the left shoulder blade, intractable with nitroglycerin, which decreased slightly after the administration of promedol. Over the past 10 days, he has noted periodic chest pain of less intensity and duration. On examination: the condition is serious, the skin is pale, covered with cold sweat. Pulse 120 per minute, weak filling and tension. Heart rate 120/min, muffled heart sounds. Blood pressure 80/40 mm Hg. Art., BH 28 per min. In the lungs, breathing is vesicular. The liver is not enlarged, there is no edema.

ECG in leads I, II, aVL, V2 - V6, arcuate rise in the ST interval, negative T wave in these leads.

1.Formulate a preliminary diagnosis; 2.Draw up
an examination plan;
3.Make a treatment plan;
4.Pathogenetic mechanisms of the developed condition?

Sample answer:

1.Diagnosis: IHD: Acute myocardial infarction in the area of the anterolateral wall of the left ventricle, complicated by cardiogenic shock. OSSN according to Killip II.

2.Examination plan:

-Emergency coronary angiography.

-Continuous monitoring of ECG, blood pressure.

-Emergency echocardiography with Dopplerography.

-X-ray of the chest organs.

-Markers of myocardial damage in dynamics.

-UAC, OAM.

- Blood creatinine, glucose, lipid spectrum.

3.Treatment plan:narcotic analgesics (Morphine) IV, oxygen therapy, inotropic support (Dopamine, Norepinephrine), including mechanical (ECMO, intra-aortic balloon counterpulsation), anticoagulants (Heparin), antiplatelet agents (Aspirin + Ticagrelol), statins (Rosuvastitin). Perform urgent PCI of all affected arteries. If PCI is not possible, perform thrombolytic therapy.

Aspirin is indicated for all patients with ACS, initial dose 150-300 mg (without enteric coating), then 75-100 mg/s (IA).

P2Y12 platelet receptor inhibitors (Ticagrelol, Prasugrel, Clopidogrel) should be prescribed to all patients with ACS in addition to Aspirin, as early as possible, in the absence of contraindications (high risk of bleeding). The duration of combined treatment is 12 months. Ticagrelol (180 mg initial dose, 90 mg twice daily maintenance dose) is recommended for all patients at moderate to high risk of coronary events (eg, high troponin levels).

The use of anticoagulants is recommended for all patients in addition to antiplatelet therapy (iv administration of Heparin).

Patients with elevation MISTs presenting to a hospital with PCI capability should undergo PCI within 90 minutes of first contact with a healthcare provider: angioplasty and stenting of the infarct-associated coronary artery. If coronary intervention cannot be performed within 120 minutes from the first contact with a medical professional, thrombolysis followed by coronary angiography is indicated: immediately in case of ineffective thrombolysis and within 3-24 hours in case of effective thrombolysis with angioplasty and stenting of the infarction-associated artery, if functionally significant stenosis persists.

4.Violation of coronary blood flow, myocardial necrosis, decreased contractility of the left ventricle, a reflex effect of the pain mechanism, hemodynamic disturbances (left ventricular failure) cannot be excluded.

Task 24.

Man A., 57 years old, called a doctor to his home. Complains of intense pressing retrosternal pain radiating to the left arm and left shoulder blade. The above symptoms appeared about 2 hours ago after intense physical activity. I took 2 tablets of nitroglycerin on my own - no effect. I had never had pain of this nature before.

History of hypertension for the last 10 years with maximum blood pressure values of 200/100 mm Hg. I did not take medications regularly. Smokes 1 pack of cigarettes a day for 30 years. Gas-electric welder. Denies allergic reactions.

Upon objective examination: the skin is moist. There is a percussion sound in the lungs, vesicular breathing, no wheezing. Heart sounds are weakened, the rhythm is correct, blood pressure is 160/100 mm Hg. Art., heart rate – 88 beats per 1 minute. The abdomen is soft and painless. Stool and urine output are normal.

The ECG recorded sinus rhythm, ST segment elevation > 0.2 mV in leads II, III, aVF. Transport accessibility to an emergency cardiology hospital with the ability to perform primary percutaneous intervention is 30 minutes.

1.Suggest the most likely diagnosis; 2. Justify the

diagnosis;

3.What should be the patient management tactics at the prehospital stage? Justify your choice;

4.What amount of drug care should be provided to the patient at the prehospital stage?

5.Name a diagnostic method that allows you to establish a final diagnosis of myocardial infarction?

Sample answer:

1. Preliminary diagnosis: Acute coronary syndrome with ST segment elevation in the lower wall of the left ventricle - myocardial infarction with ST segment elevation in the lower wall of the left ventricle.

Background diagnosis: Stage III hypertension, uncontrolled hypertension, risk 4 (very high).

Complication: Acute cardiovascular failure (ACHF) Killip I. 2. The diagnosis of “Acute coronary syndrome” was made based on the patient’s complaints about

typical anginal pain, lasting about 2 hours, not relieved by taking nitroglycerin; characteristic changes on the ECG: ST segment elevation > 0.2 mV in more than two adjacent leads for a man over 40 years old. The diagnosis of hypertension was established on the basis of anamnesis: increased blood pressure in the last 10 years. The stage of arterial hypertension is established based on the presence of acute coronary syndrome, indicating heart disease as an associated clinical condition. The uncontrolled degree of arterial hypertension is based on the figures of increased blood pressure in the anamnesis and during an objective examination. The risk of cardiovascular complications (CVC) is determined in accordance with the degree of blood pressure increase and the presence of an associated clinical condition. The diagnosis of OSHF I according to Killip was made based on the absence of signs of heart failure.

3.The patient requires emergency hospitalization. It is necessary to call an emergency medical team - an intensive care team. Considering that transport accessibility to the emergency cardiology hospital is less than 120 minutes from the moment

first medical contact, the most appropriate tactic is to perform a primary percutaneous intervention (PCI).

4. Drug treatment at the prehospital stage includes: pain relief - Nitroglycerin in a dose of 0.4-0.5 mg in the form of tablets under the tongue or an aerosol (spray) to control blood pressure, if ineffective - Morphine IV in fractions. Before use, 10 mg of morphine is diluted in 10 ml of 0.9% sodium chloride solution. Initially, 2-4 mg of the drug should be administered intravenously slowly. If necessary, the administration is repeated every 5-15 minutes at 2-4 mg until pain is relieved or side effects occur that do not allow increasing the dose.

Antithrombotic therapy: Aspirin 250 mg chewed, loading dose of Clopidogrel - 600 mg orally, direct anticoagulants IV bolus - Heparin 70-100 U/kg, if necessary, repeated administration is possible in order to maintain the activated clotting time 250-350 sec (first determination after 2-5 minutes after injection, then every 20-30 minutes throughout the PCI procedure). Heparin use is discontinued after successful completion of the PCI procedure.

Oxygen therapy.

To reduce the risk of complications and improve the prognosis, the patient is recommended to administer an intravenous beta-blocker (metoprolol 5 mg 2-3 times with an interval of at least 2 minutes) under the control of blood pressure and heart rate.

5. The "gold standard" for diagnosing myocardial infarction is the detection of cardiac-specific enzymes in the blood. The diagnosis can be established at the hospital stage when the most specific markers of myocardial necrosis - cardiac troponins - are detected in the blood.

Task 25.

Man V., 59 years old, was hospitalized at the cardiology clinic from 09/01/2019 to 09/14/2019 for anterior Q-shaped myocardial infarction dated 09/01/2019. He was admitted with complaints of intense pressing retrosternal pain with irradiation in the area of the left shoulder blade, shortness of breath that occurred after a stressful situation.

From the anamnesis it is known that in the last 2 years the blood pressure periodically increased to a maximum of 160/90 mm Hg. He did not receive continuous drug therapy; he occasionally took captopril 25 mg. During physical activity, discomfort in the cardiac region and shortness of breath periodically occurred. He did not seek medical help. He has been smoking 1⁄2 pack of cigarettes a day for more than 30 years.

The family history is burdened. My father died of a myocardial infarction at the age of

60. The patient works as a tower crane operator.

Upon admission, coronary angiography was performed, occlusion of the anterior interventricular artery was detected, percutaneous transluminar coronary angioplasty (PTCA) and endoprosthetics of the anterior interventricular artery were performed.

Results of a biochemical blood test: total cholesterol - 6.36 mmol/l, LDL - 3.69 mmol/l, HDL - 1.25 mmol/l, TG - 2.26 mmol/l, fasting glucose - 4.5 mmol/ l.

EchoCG: left ventricular hypertrophy, enlargement of the left atrium cavity. Local hypokinesia of the lateral wall of the left ventricle. Mitral regurgitation grade 2, tricuspid regurgitation grade 1. Impaired left ventricular diastolic function (VE/VA <1.0). PV – 50%.

The period of inpatient treatment was uneventful; after discharge, the patient was sent to a specialized cardiac rehabilitation hospital, where he remained until September 30, 2019.

Bicycle ergometry results: submaximal heart rate of 137 beats/min was achieved at a load of 100 W.

6-minute walk test results: 412 meters covered in 6 minutes.

On September 30, 2019, he showed up for an appointment at the clinic at his place of residence. Complaints of shortness of breath that occurs when walking quickly.

He constantly takes Aspirin 100 mg/day, Clopidogrel 75 mg/day, Atorvastatin 40 mg/day, Bisoprolol 2.5 mg/day, Lisinopril 5 mg 2 times a day.

On examination: condition is satisfactory. Body mass index – 37 kg/m2. The skin is clean and of normal color. In the lungs, breathing is vesicular, there are no wheezes. NPV 16 per minute. Heart sounds are weakened, the rhythm is correct. Heart rate – 70 beats per minute, blood pressure – 150/100 mm Hg. The abdomen is soft and painless on palpation in all parts. The liver and spleen are not enlarged. There is no swelling. There are no dysuric disorders. The symptom of tapping in the lumbar region is negative on both sides.

1.Suggest the most likely diagnosis; 2. Justify the
diagnosis;

3.Develop a rehabilitation program at the outpatient stage;

4.Evaluate the data from laboratory tests and an objective examination of the patient, and adjust drug therapy.

Sample answer:

1.IHD: angina pectoris II FC. Post-infarction cardiosclerosis (09/01/2019).
PTCA and endoprosthetics of the anterior interventricular artery (09/01/2019).

Background: Stage III hypertension, uncontrolled hypertension, risk 4 (very high). Obesity II degree. Hyperlipidemia.

Complication: CHF stage IIA, FC II.

2.The diagnosis of "IHD: exertional angina" was made based on the patient's complaints of typical anginal pain, medical history, the presence of stenosing atherosclerosis of the coronary arteries (according to coronary angiography), and previous myocardial infarction. Post-infarction cardiosclerosis was diagnosed because more than 28 days have passed since the myocardial infarction. The functional class of exertional angina is determined in accordance with the results of bicycle ergometry (a load of 100 W corresponds to the second FC). The diagnosis of "Hypertension" was established based on medical history (increased blood pressure in the last 2 years), the stage was established based on the presence of coronary artery disease, post-infarction cardiosclerosis as an associated clinical condition. The uncontrolled degree of hypertension is based on the increase in blood pressure in the anamnesis and during an objective examination. The risk of cardiovascular events is determined according to the degree of blood pressure increase and the presence of an associated clinical condition. Obesity II degree. established based on BMI value. Hyperlipidemia was established based on increased levels of total cholesterol, LDL, and triglycerides. The diagnosis of "Chronic heart failure" was established based on the patient's complaints of shortness of breath during exercise and the presence of left ventricular diastolic dysfunction according to echocardiography. The stage of CHF was determined in accordance with the Vasilenko-Strazhesko classification based on the presence of moderate signs of circulatory failure in the pulmonary circulation. The FC of CHF is determined in accordance with the distance covered in the 6-minute walk test.

3.After the patient is discharged from the inpatient cardiac rehabilitation department, he is sent to the clinic at his place of residence, where he is observed for 1 year by a cardiologist. In the absence of a cardiologist, the patient is observed by a local physician. After a year, the patient is transferred to the observation group with other forms of IHD. The cardiac rehabilitation program at the outpatient stage includes supervised physical training (PT) programs. The patient should perform moderate-intensity aerobic exercise therapy for 30 minutes ≥3 times per week. PT is carried out under the control of the patient's clinical condition, blood pressure, heart rate, ECG.

In the first weeks of training, heart rate at the height of PT and in the first 3 minutes after it should not exceed the initial one by more than 20 beats per minute, and breathing should not exceed 6 beats per minute. It is allowed to increase (from the initial) systolic blood pressure by 20-40 mm Hg and diastolic blood pressure by 10-12 mm Hg. Art. For this patient as a physical

activity

dosed walking may be prescribed. For measured walking, heart rate remains the main method of monitoring the correct dosing of the load. Training heart rate can be calculated using the formula: training heart rate = (maximum heart rate O resting heart rate) × 60% + resting heart rate. The period of active monitoring of the patient should last from 3 to 6 months.

Next, the patient is prescribed uncontrolled PT, which can be easily and without any fear performed at home under self-control. Visiting educational programs "School for patients who have suffered a myocardial infarction." If necessary, psychological rehabilitation programs. Risk factor modification programs - classes with a nutritionist, smoking cessation specialist.

Vocational rehabilitation: work in the main profession is impossible (considerable physical and emotional stress, work at height). The patient is referred to medical examination to establish a disability group for 1 year. Retraining for a profession that does not involve significant physical and emotional stress.

A lipid-lowering diet is recommended.

4. During an objective examination, attention is drawn to the values of heart rate and blood pressure, which are higher than the target values after a myocardial infarction, which requires correction of drug therapy - increasing the dose of beta-blockers and ACE inhibitors until the target values of heart rate and blood pressure are achieved. In laboratory tests, attention is drawn to hypercholesterolemia (increased levels of total cholesterol, LDL, TG). It is recommended to re-examine the blood lipid spectrum 4-6 weeks after myocardial infarction, and, if necessary, adjust the dose of statins until the LDL level is less than 1.8 mmol/l.

Drug therapy: antiplatelet agents: aspirin. (100 mg 1 time in the evening after meals) + ticagrelol (60 mg 2 times a day) for 1 year after myocardial infarction, ACE inhibitors: perindopril (10 mg) or ramipril (5 mg), beta-blockers: nebivalol (10 mg in the morning) or bisoprolol (5 mg in the morning), statins: rosuvastatit (10 mg in the evening) or atorvastine (40 mg in the evening), in doses necessary to maintain target blood pressure, heart rate, LDL levels.

Task 26.

Man M., 65 years old, consulted a doctor on April 18, 2019 with complaints of periodically appearing pressing pain in the heart area during significant physical activity, which went away on its own.

From the anamnesis it is known that 3 months ago the patient suffered an acute inferior myocardial infarction with ST segment elevation. The patient underwent coronary angiography and revealed a stenosis of the right coronary artery (RCA) of 90% (LAD stenosis 35%, OS 30%), and therefore transballoon angioplasty and stenting of the RCA with a drug-eluting stent were performed.

For a long time he suffers from hypertension with a maximum increase in blood pressure numbers up to 210/110 mm Hg. Art. Feeling good with blood pressure 120/70 mm Hg. Art.

Bad habits: smoking 10 cigarettes a day for 20 years.

On examination: the condition is moderate. The skin is clean and hyperemic. Breathing in the lungs is harsh, there is no wheezing. Heart sounds are muffled and rhythmic. Heart rate – 70 beats. per minute, blood pressure – 190/100 mm Hg. The abdomen is soft and painless on palpation in all parts. The liver and spleen are not enlarged. There is no dysuria. The symptom of tapping in the lumbar region is negative.

Blood test results: total cholesterol – 5.4 mmol/l, TG – 1.6 mmol/l, HDL-C – 1.1 mmol/l; LDL cholesterol – 3.6 mmol/l.

1. Suggest the most likely diagnosis;

2.Draw up and justify a plan for additional examination of the patient;

3. List the groups of drugs and the timing of their use that should be recommended for constant use by the patient. Justify their use.

Sample answer:

1.Diagnosis: IHD. Angina pectoris, FC I. Post-infarction cardiosclerosis (01/18/2019). Transballoon angioplasty and stenting of the RCA from January 18, 2019.

Background diagnosis: Stage III hypertension, uncontrolled hypertension, risk 4 (very high). Dyslipidemia stage IIa Tobacco smoking.

CHF 0-I.

2.Follow-up plan:

-ECG (LV hypertrophy, signs of scar changes myocardium:pathological Q wave, QS wave, negative T wave).

-EchoCG(LV myocardial contractility, cavity sizes, condition of the valve apparatus, intracavitary thrombosis).

-stress - ECG with physical activity (with LVEF > 50%) to assess exercise tolerance and determine the functional class of angina.

-24-hour blood pressure monitoring (assessment of the stability of blood pressure increases, daily blood pressure profile).

Consultation with an ophthalmologist and ophthalmoscopy to assess the presence of hypertensive ophthalmopathy.

3. Drug groups:

- Dual antiplatelet therapy: COX-1 inhibitor (aspirin 75 mg in the evening) + P2Y12 receptor blocker (ticagrelol 60 mg 2 times a day) until January 18, 2020, then monotherapy with aspirin, constantly (the goal is the prevention of thrombosis).
- Beta-blockers to reduce heart rate, reduce myocardial oxygen demand, improve myocardial perfusion by prolonging diastole, constantly (bisoprolol 2.5-5 mg or metoprolol 25-100 mg in the morning). If there are contraindications to beta-blockers, the f-channel blocker ivabradine (5 mg 2 times a day) may be prescribed.
- Statins in high doses, which have hypolipidemic and pleiotropic (anti-inflammatory) effects, constantly (rosuvastatin 10-20 mg or atorvastatin 20-40 mg in the evening).
- ACE inhibitors (perindopril 5-10 mg or ramipril 5-10 mg) or angiotensin II receptor antagonists (valsartan 40-80 mg) to prevent cardiac remodeling, correct arterial hypertension, improve prognosis and reduce mortality, constantly.

Task 27.

Woman B., 46 years old, an accountant, turned to her local doctor with complaints of attacks of pressing pain in the chest radiating to the left arm, occurring at rest, mainly at night and in the early morning hours (4-6 am). The attacks go away on their own within 3-4 minutes.

From the anamnesis it is known that attacks of chest pain have been bothering me for 3 months. He tolerates physical activity well, can climb to the 4th-5th floor without stopping, and does not experience pain attacks. The appearance of chest pain is associated with a stressful situation at work. Until now, she has not sought medical help.

Family history is aggravated on the maternal side.

On examination: condition is satisfactory. Height 172 cm, weight 66 kg, BMI 22.3 kg/m2. The skin is of normal color and normal moisture. In the lungs there is vesicular breathing. NPV 16 per minute. Heart sounds are clear, rhythmic, accent of the second tone is above

projection of the aorta. Heart rate64 beats in 1 minute. Blood pressure 130/85 mm Hg. Art. The abdomen is soft and painless on palpation. The liver and spleen are not enlarged. There are no dysuric disorders.

Blood test results: fasting glucose – 5.1 mmol/l, creatinine – 76 μmol/l, total cholesterol – 6.3 mmol/l, TG – 2.2 mmol/l, HDL-C – 1.2 mmol/l , LDL-C – 4.2 mmol/l, AST – 28 units/l, ALT – 34 units/l.

ECG at rest: sinus rhythm, 60 beats per minute. EOS was not rejected.

1.Suggest the most likely diagnosis;

2.Justify the diagnosis;

3.Draw up and justify a plan for additional examination of the patient;

4.What medications would you recommend to the patient? Justify your choice.

Sample answer:

1.Diagnosis: IHD: vasospastic angina. Dyslipidemia type IIB according to Fredrickson. CHF 0.

2.The diagnosis of IHD was established based on the patient's complaints of an attack of pain, characteristic of angina in localization.

The diagnosis of "vasospastic angina" was established on the basis of the characteristics of a painful attack: substernal pain radiating to the left arm, occurring at night and in the early morning hours, self-limiting within a few minutes, the presence of high tolerance to physical activity.

The diagnosis of type IIB dyslipidemia was established on the basis of an increase in total cholesterol due to LDL-C and TG.

3.The patient is recommended:

- daily ECG monitoring to identify episodes of painful and silent myocardial ischemia, their nature (pay attention to the possibility of episodes of ST segment elevation most characteristic of this type of angina), total number and duration; possible rhythm and conduction disturbances, which, along with a large area of ischemia during an attack, may indicate an unfavorable prognosis of the disease;

-conducting echocardiography to identify areas of myocardial hypo- and akinesia, assess diastolic and systolic myocardial function and the state of the heart valve apparatus.

- stress - ECG with exercise (with LVEF > 50%) to assess exercise tolerance. In some patients, vasospastic angina develops against the background of atherosclerosis of the coronary arteries.

The next stage of diagnosis is performing coronary angiography (CAG). The main diagnostic criterion for vasospastic angina is coronary artery spasm verified by CAG - spontaneous or during a pharmacological test. Provocative tests are carried out, as a rule, in persons with intact or slightly changed coronary arteries according to the results of a previous angiographic study. The main tests for identifying vasospastic angina are a cold test, intracoronary administration of Acetylcholine, Methacholine, Histamine, Dopamine.

4.Calcium channel antagonists are recommended for the patient as antianginal drugs to prevent attacks of vasospastic angina. The effect is due to a slowdown in Ca current through the α1 and α2 adrenergic pathways and calcium channels of peripheral vessels, a decrease in the sensitivity of arterial vessels to the endogenous influences of pressor amines, which leads to a decrease in total peripheral vascular resistance and blood pressure. Dihydropyridine calcium antagonists have a pronounced selective effect on vascular muscles, leading to dilation of peripheral arteries, do not affect the conduction system of the heart and do not cause a significant decrease in myocardial contractile function. It is preferable to prescribe dihydropyridine calcium antagonists -

Amlodipine 10 mg per day. If calcium antagonists are insufficiently effective, consider adding a potassium channel blocker - Nicorandil. The prognostic effect of aspirin, statins, and ACE inhibitors in vasospastic angina in the presence of angiographically intact coronary arteries has not been studied. Despite this, given the atherogenic type of dyslipidemia, it is advisable to use statins (rosuvastatin 20 mg per day). Treatment goals are an LDL-C level < 1.8 or a reduction in LDL-C level > 50% if the target level cannot be achieved.

Task 28.

Patient F., 47 years old, was admitted to the hospital from an outpatient appointment at the clinic, where he complained of compressive pain in the chest that occurs when walking at an average pace after 500 m or when climbing stairs to the 3rd floor, passing in 1-2 minutes peace.

Chest pain first appeared 2 years ago, but the patient did not associate its occurrence with heart disease and did not consult a doctor. The real deterioration occurred within a week, when attacks of chest pain became more frequent, began to occur at lower loads - when walking quietly after 50-100 m, attacks of compressive pain appeared at rest.

From the anamnesis it is known that the patient has hypertension with maximum blood pressure values of 170/100 mm Hg. Art. Smokes up to 1 pack of cigarettes per day for 20 years. The patient's mother and father suffer from arterial hypertension. There are cases of sudden death among relatives.

On examination: condition is satisfactory. Height 175 cm, weight 76 kg. The skin is of normal color and normal moisture. In the lungs there is vesicular breathing. NPV 16 per minute. Heart sounds are clear, rhythmic, accent of the second tone over the projection of the aorta. Heart rate 74 beats per minute. Blood pressure 160/100 mm Hg. Art. The abdomen is soft and painless on palpation. The liver and spleen are not enlarged. There are no dysuric disorders.

Blood test results: fasting glucose - 4.1 mmol/l, creatinine - 79 µmol/l, AST - 28 units/l, ALT - 34 units/l.

1.What is the most likely diagnosis for this patient? 2. Justify

the diagnosis;

3.Draw up a plan for additional examination of the patient;

4.What are the further treatment tactics?

Sample answer:

1.Preliminary diagnosis: IHD: progressive angina.

Background diagnosis: Stage III hypertension, uncontrolled hypertension, risk 4 (very high). Complications: CHF 0.

2.The diagnosis of “IHD: progressive angina pectoris” was made on the basis of the patient’s complaints of increased frequency of attacks of chest pain that occur with lower loads, when walking quietly after 50-100 m and the appearance of attacks of compressive pain at rest.

The diagnosis of “Hypertension” was made on the basis of medical history: hypertension with maximum blood pressure values of 170/100 mm Hg. Art. and the presence of a risk factor: smokes up to 1 pack of cigarettes per day for 20 years.

3.Additional examination plan: lipidogram, coagulogram, ECG, EchoCG; SMEKG according to Holter; treadmill test; stress echocardiography, myocardial scintigraphy, coronary angiography.

4.Non-drug therapy (lifestyle modification, smoking cessation). Drug therapy: antiplatelet agents (aspirin 100 mg once a day in the evening or ticagrelol 60 mg 2 times a day); ß-blockers (bisoprolol 2.5-5 mg 1 tablet in the morning or metoprolol 50-100 mg 1 time per day in the morning) under the control of blood pressure and heart rate; statins (rosuvastatin 10-20 mg or atorvastitn 20-40 mg once a day in the evening); ACEI

(perindopril 5-10 mg or ramipril 10 mg once a day) or ARA II (valsartan 40-80 mg once a day); calcium channel blockers of the dihydropyridine series (amlodipine 5 mg once a day in the evening). Surgical treatment according to indications (transluminar balloon angioplasty).

Task 29.

A 57-year-old man suffers from coronary artery disease. Due to deterioration of his condition, he was admitted to the cardiology department. In order to identify the localization of atherosclerotic lesions of the coronary arteries and the severity of the process, coronary angiography was recommended. The day after the intervention, an increase in the level of serum creatinine to 130 mmol/l was noted (at admission it was 94 mmol/l). Another day later, the creatinine level reached 148 mmol/l, and diuresis in 6 hours was 240 ml. The patient's weight is 100 kg. The on-call nephrologist was called for consultation.

1. Formulate a preliminary diagnosis;
2. List the risk factors for AKI in this clinical case? 3.What signs helped you suspect the diagnosis?
4. What diseases need differential diagnosis? 5.What additional studies are needed to confirm the diagnosis? Which Are specialists needed to consult a patient?
6. Prescribe treatment.

Sample answer:

1. Diagnosis: Renal post-contrast acute kidney injury, stage 1 (according to KDIGO 2012).
2. The patient has the following risk factors for AKI: male gender, history of atherosclerotic disease (CHD), use of a contrast agent.
3. The diagnosis was suspected due to the presence of risk factors in the patient against the background of an increase in creatinine by more than 26 μmol/L over 48 hours and a decrease in urine output of less than 0.5 ml/kg/6 hours.
4. Differential diagnosis should include other causes of AKI (eg, drug-induced AKI, AKI secondary to AMI), as well as CKD.
5. For the purpose of further examination, the patient must perform: a general blood test, a general urinalysis, a biochemical blood test (creatinine, urea, potassium, sodium, glucose, bilirubin (direct and indirect), AlT, AST, GGTP, total protein, albumin), determination of GFR according to CKD-EPI, acid-base balance, blood gas analysis. Instrumental methods: ultrasound of the kidneys and renal arteries, ultrasound of the abdominal organs, ultrasound of the heart, ECG, nephrobiopsy (if oliguria persists for more than 2-3 weeks). Consultation with a nephrologist, urologist and dialysis department doctor is required.
6. For the treatment and prevention of contrast-induced AKI, correction of hypovolemia using 0.9% sodium chloride solution and crystalloid solutions is recommended. Infusion volumes are determined individually. Nephroprotective therapy using RAAS blockers (in the treatment regimen for coronary artery disease, the patient must have an ACE inhibitor, for example, perindopril 5 mg - 1 tablet in the morning), statins (rosuvostatin 10 mg - 1 tablet in the evening). For GFR more than 30 ml/min/1.73 m2 - a thiazide or thiazide-like diuretic (for example, indapamide 1.5 mg - 1 tablet in the morning), for GFR less than 30 ml/min/1.73 m2 - a loop diuretic (for example, torsemide – 10 mg – 1 tablet in the morning). Sorbents, for example, Polysorb - the dose is selected individually per kg of body weight. The rest is supportive symptomatic therapy with monitoring of daily diuresis, creatinine, urea and serum potassium levels. With the progression of AKI and a further increase in creatinine, consider the possibility of renal replacement therapy.

Task 30.

Male, 54 years old. He was admitted by emergency medical service with symptoms of ACS. During an objective examination, fine bubbling rales are heard in the lower parts of the lungs, respiratory rate is 23/min, blood pressure is 70/40 mm Hg, pulse is 110 beats/min. On EchoCG: EF 28, hypokinesia of the posterior and lateral walls of the LV. The next day, against the background of therapy, blood pressure was 90/50 mm Hg, respiratory rate 100/min, echocardiography showed EF 30, blood test showed: potassium 5.5 mmol/l, creatinine 160 µmol/l, volume of urine excreted per 6 hours 200 ml. On the 8th day after admission, potassium 6.5 mmol/l, creatinine 320 µmol/l, urea 29 mmol/l, volume of urine excreted in 6 hours 200 ml.

1. Formulate a preliminary diagnosis;
2. List the risk factors for AKI in this clinical case? 3.What signs helped you suspect the diagnosis?
4. What diseases need differential diagnosis? 5.What additional studies are needed to confirm the diagnosis? Which Are specialists needed to consult a patient?
6. Prescribe treatment.

Sample answer:

1. Diagnosis:

- Acute kidney disease, stage 1.

2. Risk factors for AKI in this clinical case are: male gender and a sharp decrease in ejection fraction due to ACS with subsequent renal hypoperfusion.
3. The diagnosis of ABP was suspected due to the presence of risk factors in the patient against the background of an increase in creatinine by more than 26 µmol/L over 48 hours and a decrease in urine output of less than 0.5 ml/kg/6 hours and persistent oliguria for more than 6 days.
4. Differential diagnosis should include other causes of AKI (eg, drug-induced AKI, AKI secondary to AMI), as well as CKD.
5. For the purpose of further examination, the patient must perform: a general blood test, a general urinalysis, a biochemical blood test (creatinine, urea, potassium, sodium, glucose, bilirubin (direct and indirect), AlT, AST, GGTP, total protein, albumin), determination of GFR according to CKD-EPI, acid-base balance, blood gas analysis. Instrumental methods: ultrasound of the kidneys and renal arteries, ultrasound of the abdominal organs, ultrasound of the heart, ECG, nephrobiopsy (if oliguria persists for more than 2-3 weeks). Consultation with a nephrologist, urologist and dialysis department doctor is required.
6. The patient is recommended to continue therapy for post-AMI with the use of cardio- and nephroprotectors (RAAS blockers, SGLT-2 inhibitors, statins, antiplatelet agents). A consultation is required to transfer the patient to the department of efferent treatment methods due to the presence of indications for acute dialysis (urea >27 mmol/l, hyperkalemia >6 mmol/l, oliguria).

Task 31.

Woman, 52 years old. Suffering from type 2 diabetes mellitus for 6 years, receiving treatment for the last 5 years (Diabeton MB 60 mg 1 tablet in the morning, Metformin 500 mg - 1 tablet in the evening), the level of glycated hemoglobin is 6.7‰. Height 166 cm, 92 kg. At the last visit to the endocrinologist, the TAM was recorded as albumin 0.33 g/l, a blood test showed potassium 5.8 mmol/l, uric acid 540 µmol/l, creatinine 98 µmol/l. At a repeat visit after 3 months, the level of albumin in the urine remained at the same level, potassium 5.5 mmol/l, creatinine 101 µmol/l, the woman began to notice pasty legs and a periodic increase in blood pressure to 160/100 mm Hg.

1. Formulate a preliminary diagnosis; 2.What factors of CKD does the patient have?
3. What signs helped to suspect the diagnosis?

4.What diseases need differential diagnosis? 5.What additional studies are needed to confirm the diagnosis? Which
Are specialists needed to consult a patient?

6. Prescribe treatment.

Sample answer:

1.Main diagnosis: Type 2 diabetes mellitus, target HbA1c level <6.5%. Complications: Diabetic nephropathy, CKD C3a (GFR according to CKD-EPI 57 ml/min/1.73 m²)
A3.

Associated: Arterial hypertension stage 3, stage II, risk 4 (very high). Hypertensive nephropathy. CHF 0. Nutritional-constitutional obesity 1 tbsp. Hyperuricemia.

2.This patient has the following risk factors for CKD: diabetes mellitus, arterial hypertension, obesity.

3.The diagnosis was suspected based on the duration of the disease history, the ineffectiveness of glucose-lowering therapy, the presence of manifestations of microangiopathy (albuminuria), and arterial hypertension.

4.Differential diagnosis should be carried out between CKD of mixed origin(diabetic and hypertensive), medicinal chronic
tubulointerstitial nephritis and ischemic kidney disease.

5.For the purpose of further examination, the patient must perform: a general blood test, a general urinalysis, a biochemical blood test (creatinine, urea, potassium, sodium, glucose, bilirubin (direct and indirect), AlT, AST, GGTP, total protein, albumin), a coagulogram, lipid profile, determination of GFR by CKD-EPI. Instrumental methods: ultrasound of the kidneys and renal arteries, ultrasound of the abdominal organs, ultrasound of the heart, ECG. Consultation with a nephrologist, cardiologist, nutritionist and therapist is required.

6.The patient is recommended to optimize nutrition using the principle of bread units and limit easily digestible carbohydrates in the diet. Follow a diet if uric acid levels are high. Add moderate physical activity. In drug therapy, diabetes should be discontinued and the patient transferred to the combination drug metformin + empagliflozin 1000 mg + 5 mg - 2 times a day in the morning and evening. In addition to achieving HbA1c targets, empagliflozin will reduce cardiovascular risk through cardiac and nephroprotective effects. It is also recommended that the patient be prescribed antihypertensive therapy using RAAS blockers as cardio- and nephroprotectors (for example, perindopril in combination with indapamide 5 mg + 1.25 mg - 1 tablet in the morning 1 time per day), taking into account that for albuminuria A3 the target level is SBP should be in the range of 120-130 mm Hg. Due to the fact that the patient belongs to a very high risk group, she is advised to use acetylsalicylic acid (75 mg - 1 tablet in the evening). In order to reduce uric acid levels, it is recommended to add allopurinol 100 mg to therapy
– 1 tablet in the morning, 1 time per day, followed by dose adjustment and monitoring of uric acid levels no more than once every 3 weeks, achieving a target uric acid level of less than 360 µmol/l. After receiving the results of the lipid profile, correction of carbohydrate metabolism is required with selection of the statin dose. The patient needs consultation with an endocrinologist, cardiologist, nephrologist, nutritionist and therapist.

Task 32.

A 28-year-old woman was admitted to the rheumatology department.department with complaints of swelling of the lower extremities, shortness of breath, a butterfly-shaped rash on the face, red urine. Blood pressure 140/90 mm Hg. In the UAC there is anemia, thrombocytopenia; in a blood test - creatinine 220 µmol/l; in OAM, albuminuria (2.8 g/l), altered red blood cells throughout the entire field of view. Diuresis is normal. Positive test for antinuclear factor. Based on the results of nephrobiopsy, the patient was diagnosed with SLE with diffuse kidney damage

proliferative glomerulonephritis (class IV), pathogenetic therapy was prescribed. During the treatment, the patient's condition improved, and protein loss in the urine decreased (albuminuria 0.5 g/l). After 6 months of observation, creatinine was 140 µmol/l. She was referred for consultation to a nephrologist.

1.Formulate a preliminary diagnosis; 2.What signs
helped to suspect the diagnosis?
3.What diseases need differential diagnosis? 4.What additional studies are needed to confirm the diagnosis? Which
Are specialists needed to consult a patient?
5. Prescribe treatment.

Sample answer:

1. Main diagnosis: Systemic lupus erythematosus, subacute course, moderate degree of activity, "lupus nephritis" (nephrotic form) class IV, type diffuse proliferative glomerulonephritis in the stage of incomplete remission.

Complications: chronic kidney disease C3b (GFR according to CKD-EPI 57 ml/min/1.73 m²) A3. 2. The diagnosis was suspected based on the history of the disease, the presence of manifestations
SLE, changes in TAM (albuminuria, hematuria) for more than 3 months, decrease in GFR less than 60 ml/min/1.73 m² for more than 3 months.

3.Differential diagnosis should be carried out with Sharpe's syndrome, Still's disease in adults, drug-induced lupus, and systemic vasculitis.

4.For the purpose of further examination, the patient must perform: a general blood test, a general urinalysis, a biochemical blood test (creatinine, urea, potassium, sodium, glucose, bilirubin (direct and indirect), AlT, AST, GGTP, total protein, albumin),coagulogram, lipid profile, determination of GFR by CKD-EPI in dynamics.

Instrumental methods: ultrasound of the kidneys and renal arteries, ultrasound of the abdominal organs, ultrasound of the heart, ECG. Consultation with a nephrologist, rheumatologist and cardiologist is required. 5. The patient is recommended to continue pathogenetic therapy for SLE prescribed by the rheumatologist. For the purpose of nephroprotection, it is recommended to add a RAAS blocker to the regimen, despite normotension (for example, irbisartan - 150 mg - 1 tablet in the morning once a day) under blood pressure control (taking into account that for A3 albuminuria, the target SBP level should be in the range 120-130 mmHg), drugacetylsalicylic acid (75 mg – 1 tablet in the evening).

gainnephroprotective effect, inclusion of the drug group in the regimen should be considered
iNGLT-2 under the control of blood glucose levels.

Task 33.

A 49-year-old woman has been suffering from rheumatoid arthritis for 20 years. During this time, exacerbations are observed 3-4 times a year, accompanied by severe pain, edema and swelling of the affected joints, as well as limited mobility in them. Therefore, the patient receives various NSAIDs in courses lasting 2-4 weeks. Fearing the development of an exacerbation of the disease, she takes various NSAIDs, including those with minimal symptoms.

As part of the basic therapy, he receives methotrexate 7.5 mg once a week. Due to the ineffectiveness of therapy, she turned to a rheumatologist, who, during examination, found 0.4 g/l of protein in the TAM, 15 leukocytes in the field of view; In a blood test, creatinine is 135 µmol/l, urea is 11 mmol/l. The level of RF in the blood is increased, ESR is 36, CRP is 11. Culture for microflora is negative. Referred to a nephrologist for consultation.

1.Formulate a preliminary diagnosis; 2.What signs
helped to suspect the diagnosis?
3.What diseases need differential diagnosis? 4.What additional studies are needed to confirm the diagnosis? Which

Are specialists needed to consult a patient?

5. Prescribe treatment.

Sample answer:

1.Main diagnosis: Rheumatoid arthritis, seropositive, active phase, stage II activity.

Associated: Chronic tubulointerstitial nephritis of drug origin (NSAID nephropathy). Chronic kidney disease stage C3b (GFR according to CKD-EPI 40 ml/min/1.73 m²). A3.

2.The diagnosis was suspected based on a history of the disease (long-term ineffective treatment of rheumatoid arthritis with constant use of NSAIDs to reduce pain), the presence of manifestations of RA, changes in TAM (albuminuria, sterile leukocyturia) for more than 3 months, a decrease in GFR less than 60 ml/min/1, 73m² for more than 3 months, elevated ESR, RF, CRP and uric acid levels.

3.Differential diagnosis should be carried out with other diffuse connective tissue diseases, in particular Sharpe's syndrome, Felty's syndrome, as well as SLE, Still's disease in adults, systemic vasculitis and renal amyloidosis.

4.For the purpose of further examination, the patient must perform: a general blood test, a general urinalysis (with determination of nitrites and leukocyte esterase), a biochemical blood test (creatinine, urea, potassium, sodium, glucose, bilirubin (direct and indirect), AlT, AST, GGTP, total protein, albumin), coagulogram, lipid profile, determination of the level of antibodies to cyclic citrullinated peptide (ACCP) and antinuclear antibodies (ANA), as well as GFR according to CKD-EPI over time. Instrumental methods: ultrasound of the kidneys and renal arteries, ultrasound of the abdominal organs, ultrasound of the heart, ECG, ABPM, radiography of the affected joints. With rapid progression of CKD, the possibility of performing a nephrobiopsy should be considered to exclude renal amyloidosis, as one of the complications of rheumatoid arthritis. Consultation with a nephrologist, rheumatologist and cardiologist is required.

5.Due to the ineffectiveness of treatment for rheumatoid arthritis, correction of disease-modifying therapy is required with the selection of drugs and optimal dosages, which will reduce the frequency of the patient taking NSAIDs, which increase cardiovascular risk and the rate of progression of CKD. In order to reduce these risks, it is recommended to add RAAS blockers to therapy under blood pressure control (taking into account that for A3 albuminuria, the target SBP level should be in the range of 120-130 mm Hg), acetylsalicylic acid (75 mg - 1 tablet in the evening). In order to enhance the nephroprotective effect, the inclusion of the NGLT-2 group in the drug regimen under the control of blood glucose levels should be considered. Rheumatoid arthritis contributes to the progression of atherosclerosis, and therefore, based on the results of a lipid profile, as well as an assessment of cardiovascular risk, a lipid-lowering drug and its optimal dose should be selected (for example, atorvastatin 40 mg - 1 tablet in the evening).

Task 34.

Woman B. consulted a doctor,33 years old, with complaints of dull, bursting pain around the navel and left side of the abdomen, occurring 3 hours after eating, bloating and strong rumbling in the abdomen, profuse loose stools up to 4 times a day, weakness, increased fatigue, weight loss.

The above symptoms have been bothering me for 2 years; the deterioration of the condition is provoked by eating spicy food.

Objectively: Body temperature - 37.4 0C. The condition is satisfactory. The skin and visible mucous membranes are clean, pale, dry. In the corners of the mouth, “jams” are identified. The subcutaneous fat layer is underdeveloped. There is no pathology in the lungs or heart.

The tongue is moist, thickly coated with white coating. The abdomen is soft, moderately painful in the umbilical area.

An examination by an ophthalmologist revealed iridocyclitis.

On fibrocolonoscopy: hyperemia, edema, absence of mucous pattern, microabscesses, pinpoint hemorrhages.

1. Formulate a preliminary diagnosis;
2. Name the necessary additional research;
3. Determine your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

Sample answer:

1. Preliminary diagnosis: Ulcerative colitis, chronic continuous course, left-sided lesion, moderate attack. Extraintestinal manifestations (iridocyclitis).
2. Examination plan:

- general blood and urine analysis;
-bacteriological and microscopic examination of feces;
- determination of biochemical blood test parameters: C-reactive protein, fecal calprotectin, total protein, albumin, liver tests, hemocoagulogram, electrolytes;
-examination of the anal area, digital examination of the rectum;
- biopsy of the rectal mucosa and other areas of the colon mucosa;
- fibrogastroduodenoscopy;
- Ultrasound of the abdominal organs, retroperitoneum, pelvis. 3. Treatment plan:

1) oral mesalazine 3-4.8 g/day in combination with mesalazine in enemas 2-4 g/day.
2) If there is no effect, oral administration of systemic glucocorticosteroids at a dose of 60 mg of prednisolone or topical glucocorticosteroids at a dose of 9 mg/day of budesonide for 8 weeks is indicated.
3) A combination with azathioprine 2 mg/kg is indicated.
4) If there is no effect from GCS within 2 weeks, biological therapy (infliximab, adalimubab, golimubab or vedolizumab) is indicated.
5) Antibacterial agents: ciprofloxacin 400 mg 2 times a day + metronidazole 1.5 g for 7-10 days.
6) Clinical observation for ulcerative colitis is carried out for life. In the stage of clinical remission, colonoscopy should be performed at least every 3 years. The patient should be explained the need to constantly take medications, since this reduces the frequency of exacerbations and is a method of chemoprophylaxis for colorectal cancer.

The long-term prognosis of ulcerative colitis is assessed by the presence of endoscopic remission; every 6 months it is necessary to examine stool for the level of fecal calprotectin and sigmoidoscopy.

The risk of severe exacerbation of ulcerative colitis during life is 15%; with adequate anti-relapse therapy for 5 years, exacerbations can be avoided in 50% of patients, and within 10 years in 20% of patients. Risk factors for the aggressive course of ulcerative colitis are progression of the lesion from distal to total, primary sclerosing cholangitis, childhood and adolescence at the time of onset of the disease.

When using immunosuppressants, prevention of opportunistic infections and vaccination are indicated:

1. Recombinant vaccine against HBV.
2. Polyvalent inactivated pneumococcal vaccine.
3. Trivalent inactivated influenza vaccine.

4. For women under 26 years of age - vaccination against human papillomavirus.

Task 35.

Male F., 36 years old. When contacting the clinic, he complains of loose stool mixed with blood up to 12 times a day, cramping pain in the lower abdomen before defecation, weight loss of 8 kg in 3.5 months.

From the anamnesis, the presence of blood in the stool and unformed stools for 3.5 months.

The temperature did not rise. He denies contact with infectious patients and has not traveled outside the region. I smoked 1 pack of cigarettes a day for 10 years and stopped a year ago.

Denies alcohol abuse or intravenous drug addiction. There are no relatives with gastrointestinal diseases. Works as a manager, no professional hazards.

Objectively: the condition is satisfactory. Temperature 36.7 °C. The skin is pale and moist. Height – 175 cm, weight – 58 kg. There is vesicular breathing in the lungs, there are no adverse breath sounds. NPV – 18 per minute. On auscultation, the heart rhythm is correct, the tone ratio is normal, and there are no murmurs. Heart rate – 98 beats per minute. Blood pressure – 110/70 mm Hg. Art. Upon examination, the abdomen is symmetrical and participates in the act of breathing. On palpation, it is soft and painful in the left flank and left iliac region. Liver according to Kurlov – 9×8×7 cm. Dimensions of the spleen – 6×4 cm. Urination is free and painless.

Complete blood count: erythrocytes – 2.7×1012, Hb – 108 g/l, color index – 0.6, platelets – 270×1012, leukocytes – 7.0×109, eosinophils – 1%, band neutrophils – 2% , segmented neutrophils – 65%, lymphocytes – 27%, monocytes – 5%, ESR – 22 mm/h.

Coprogram: unformed feces, mucus +++, leukocytes – 10-15 per field of view, erythrocytes – 5-6 per field of view.

Fiber colonoscopy: the mucosa of the descending colon, sigmoid and rectum is diffusely hyperemic, bleeds easily upon contact with the colonoscope, the vascular pattern is blurred. Multiple erosions covered with fibrin were detected in the rectosigmoid region.

1.Suggest the most likely diagnosis; 2. Justify the
diagnosis;

3.Draw up and justify a plan for additional examination of the patient;

4.DrugsWhich groups are indicated for treating a patient in this situation? Justify your choice;

5.After 2 weeks of therapy, there was a decrease in the frequency of stools to 2 times a day, there was no blood in the stool. What are your further treatment tactics? Justify your choice.

Sample answer:

1.Preliminary diagnosis: Ulcerative colitis, left-sided lesion, acute course with gradual onset, moderate severity. Moderate anemia.

2.The diagnosis of “ulcerative colitis” was established on the basis of characteristic clinical manifestations - diarrhea mixed with mucus, blood for three months, endoscopic signs of damage to the rectum, continuous damage, contact bleeding, the presence of superficial ulcers of the colon mucosa. The diagnosis of anemia was established on the basis of a decrease in hemoglobin and red blood cells in a general blood test.

3.The patient is recommended to undergo additional examination: general urine test, biochemical blood test (total protein, albumin, total bilirubin, direct and indirect bilirubin, glucose, total cholesterol, AST, ALT, alkaline phosphatase, GGT, potassium, sodium, creatinine, amylase, CRP, iron, OZHS, ferritin), histological examination of colon biopsies, bacteriological examination of feces, detection of Clostridium difficile toxins A and B in feces, ultrasound of the abdominal cavity, fibrogastroduodenoscopy.

4.Drug treatment: Mesalazine 4-5 g orally in combination with Mesalazine rectally (suppositories, foam, microenemas) 2-4 g per day for 6-8 weeks. Mesalazine, a derivative of 5-aminosalicylic acid, is the drug of choice for the treatment of UC in this situation: the first attack is of moderate severity, the patient has not previously received treatment. For left-sided lesions, rectal forms of Mesalazine are effective. If iron deficiency is confirmed, replacement therapy (Sorbifer - 1 x 2 times a day, in case of intolerance - parenteral forms).

5.When remission is achieved, continuous use of Mesalazine 1.5-2 g/day orally (prescribing Sulfasalazine 3 g/day is acceptable) in combination with Mesalazine 2 g 2 times a week rectally.

Task 36.

Patient S., 30 years old, a programmer, went to the clinic to see a therapist with complaints of dull, aching, low-intensity pain in the lower abdomen closer to the left flank, occurring before defecation, or intensifying immediately after bowel movement, lasting about 30-40 minutes, liquefied stool mixed with mucus and small amounts of scarlet blood, stool frequency up to 5-6 times a day, including at night, false urge to defecate with discharge from the rectum of only mucus mixed with scarlet blood, a feeling of rumbling, seething in the abdomen during the day, weight loss of 6 kg over the past 4 months.

From the anamnesis: he first noticed bowel dysfunction 5 months ago after a trip to the south in the summer and associated this symptom with eating habits (consuming large quantities of vegetables and fruits). Diarrhea persisted and progressed even after returning from vacation. I took smecta and mezim on my own with insignificant and unstable effects. After 1.5 months, he noted the appearance of mucus and streaks of blood in the stool, then mild pain appeared on the left flank of the abdomen. Started taking no-shpa. On the advice of a relative, 2 weeks ago I took chloramphenicol, 3 tablets a day, for 5 days; against this background, diarrhea and abdominal pain increased significantly, and the amount of blood in the stool increased, which was the reason for contacting a local doctor. He put off seeking medical help because he believed that he had some kind of infectious intestinal disease and was afraid of hospitalization in the infectious diseases department, preferring to treat himself. In the past, during the student period, there were repeated episodes of loose stools, the occurrence of which the patient associated with the consumption of allegedly poor-quality products. As a rule, he treated himself independently, using decoctions of astringents.

On examination: conditionsatisfactory, temperature - 36.8 °C, height - 178 cm, weight - 61 kg, skin and visible mucous membranes are pale pink in color. Breathing is vesicular in all parts, there is no wheezing. NPV – 18 per 1 min. On auscultation, heart sounds are muffled and the rhythm is correct. Heart rate – 92 per minute. Blood pressure – 120/85 mm Hg. The tongue is moderately diffusely coated with a grayish coating, moist. The abdomen participates in breathing, is moderately evenly swollen, soft on superficial palpation, moderate pain is detected along the left flank of the abdomen, on deep palpation there is distinct pain in the left iliac region, where the spasmodic, densely elastic, painful sigmoid colon is palpated; the remaining parts of the colon are painless. Palpation of the epigastric and subcostal areas is painless. Blistering symptoms are negative. Dimensions of the liver and spleen according to Kurlov: 10x8x7 cm and 6x4 cm, respectively. The edge of the liver is not determined. The symptom of effleurage in the lumbar region is negative.

In the tests: red blood cells = 3.02 × 1012/l, Hb = 103 g/l, MCH - 23p/g, MCHC – 300 g/l, leukocytes = 12.6 × 109/l. ESR = 38 mm/hour.

Coprogram: liquefied, unformed feces, muscle fibers, intracellular starch in small quantities, leukocytes up to 30-40 in the field of view, red blood cells

in significant quantities, mucus in large quantities. Fecal calprotectin 532 mcg/g.

Total serum protein 62.3 g/l, albumin – 49.3%, globulins 50.7%, CRP – 95 mg/l.

Sigmoidoscopy without preparation: the device is inserted up to 18 cm. The rectal mucosa is diffusely hyperemic, edematous, severe contact bleeding, multiple erosions, in places confluent, covered with fibrin. There is mucus in the intestinal lumen, blood-stained, and liquid stool in small quantities.

1.Suggest the most likely diagnosis; 2. Justify the diagnosis;

3.What additional research methods would you prescribe for this patient?4. Determine a plan for managing the patient using medications And non-drug methods.

Sample answer:

1.Preliminary diagnosis: Newly diagnosed ulcerative colitis, distal form, moderate activity. Mild chronic posthemorrhagic anemia.

2.The patient has diarrhea syndrome, pathological impurities in the stool (mucus, blood), false urge to defecate, moderate pain in the projection of the sigmoid colon, markers of systemic inflammation syndrome, high levels of fecal calprotectin and quite specific endoscopic changes in the rectal mucosa. The disease manifested itself after a trip to the south (exposure to insolation, diet high in plant fiber).

3.In addition to the examination, the patient is recommended to undergo fibrocolonoscopy (assessment of the extent of damage to the colon) with a biopsy of the colon mucosa from the area of maximum damage in order to assess the severity of the inflammatory process. Bacteriological examination of stool to exclude microbial origin of inflammation of the colon mucosa. Examination of stool to exclude helminthic-parasitic infestation. Serological diagnosis of CMV infection, HIV infection. Biochemical blood test (bilirubin, ALT, AST, proteinogram, serum iron, ferritin, total iron-binding capacity of blood, glucose), ultrasound examination of the abdominal cavity.

4.The patient has a newly diagnosed serious intestinal disease in the acute phase that continuously progresses over at least 5 months. The patient needs dynamic medical supervision in order to timely and adequately adjust treatment if necessary. Inpatient treatment is indicated in a specialized gastroenterology department. Diet therapy – table 4.

Active complex drug therapy, including the use of steroid hormones (systemic and local: Prednisolone, Budesonide, Hydrocortisone) acting on the mucous membrane of the colon. The drugs of choice in the acute stage of the pathological process (distal or left-sided) are topical steroids in standard doses (0.5-1.0 mg/kg/s) for at least 8 weeks. Preparations of 5-aminosalicylic acid (5-ASA): Mesalazine, Sulfasalazine - in the form of an oral agent and local dosage forms (suspension, suppositories, foam) are prescribed for a long time, at the stage of achieving clinical and endoscopic remission - in maintenance doses constantly. If clinical and endoscopic remission is achieved using steroid hormones, remission is maintained using immunosuppressants (Azathioprine, Metatrexate). Symptomatic therapy is used according to indications (pancreatic multienzyme agents, iron supplements, etc.).

Task 37.

Patient B., 28 years old, a military man, complains of pain in the right iliac region of a constant nature (at night he often wakes up from pain). On

In this background, attacks of colic-type pain periodically occur. Concerns about severe weakness, weight loss, diarrhea - stool 3-4 times a day in the form of liquid gruel, without pathological impurities, copious. Notes an increase in temperature to 37.6 °C daily, especially in the evening.

History of the disease: fell ill 1 year ago, when suddenly, in the midst of complete health, intense pain appeared in the right iliac region, temperature increased to 38.0 °C. He was taken to the emergency department, where he was examined by a surgeon and diagnosed with acute appendicitis. A blood test revealed leukocytosis, and the patient was taken for surgery.

During the inspection, a thickened ileum with an edematous loose wall and enlarged mesenteric lymph nodes were discovered. The vermiform appendix is not changed. An appendectomy was performed. In the postoperative period, hyperthermia appeared up to 38.5 °C; with the introduction of antibiotics, the temperature dropped to low-grade levels, but did not completely disappear. The pain in the right iliac region persisted and became dull and constant. The patient began to notice an increase in stool frequency, at first up to 2 times a day, then 3-4 times; the stool initially had the character of a thick porridge ("cow feces"), then it became liquid. Small amounts of mucus and blood periodically appeared in the stool. Weakness gradually increased, and during the year of illness the patient lost 6 kg of body weight.

Objectively: low nutrition, the skin is somewhat dry, turgor is reduced. Peripheral lymph nodes are not palpable. Lungs and heart without pathological changes. Pulse - 80 beats per minute, blood pressure - 110/70 mm Hg. Art. The tongue is covered with a white coating. The abdomen is involved in breathing, in its usual configuration. On palpation, pain is noted in the right lower quadrant; a compacted, painful cecum and slightly higher, swollen, rumbling loops of the small intestine are palpated here. For the rest of the course, no pathological changes were detected. Liver along the edge of the costal arch. The spleen is not palpable.

Laboratory and instrumental studies obtained the following data: General blood test: hemoglobin - 117 g/l, ESR - 34 mm/hour, red blood cells - 3.2×1012/l,
leukocytes - 12.6×109/l, eosinophils - 2%, band neutrophils - 10%, segmented neutrophils - 51%, lymphocytes - 37%.

Biochemical blood test: total protein - 52 g/l, albumin - 55%, globulins: alpha1 - 3.7%, alpha2 - 10.0%, beta - 11.0%, gamma -20.3%. Total bilirubin - 16.4 (direct
- 3.1; free - 13.3) mmol/l, glucose - 5.5 mmol/l, cholesterol - 3.9 mmol/l, potassium - 3.5 mmol/l, sodium - 142 mmol/l, alkaline phosphatase - 310 U/ L (norm up to 306).

RRS: scars are identified in the perianal area, in one of them there is a fistula with scanty discharge. There are single cracks between the scars. The rectum and sigmoid colon were examined, the mucous membrane along its entire length was without pathological changes.

Irrigoscopy: barium suspension retrogradely fills all parts of the colon and the ileum for 15-20 cm. There are uneven narrowings of the distal ileum and uneven contours, absence of haustra in the cecum and ascending colon.

1.Formulate a preliminary diagnosis; 2. Justify
the diagnosis;

3.Draw up and justify a plan for additional examination of the patient;

4.What group of drugs for pathogenetic therapy would you recommend to a patient as part of combination therapy? Justify your choice;

5.What is the prognosis for this disease?

Sample answer:

1.Preliminary diagnosis: Crohn's disease, ileocolitis with damage to the terminal ileum, chronic relapsing course, moderate-severe form, complicated by perianal lesions (fistula).

2.The diagnosis was suspected based on the medical history: surgery revealed a thickened ileum with a loose, edematous wall, enlarged mesenteric lymph nodes, and an unchanged appendix during surgery and histological examination; chronic course of the disease, accompanied by constant abdominal pain, diarrhea, fever in a young patient, as well as an existing complication - perianal fistula. Moderate-severe malabsorption and maldigestion syndromes.

3.The patient is recommended to undergo further examination:

- biochemical blood test with determination of electrolytes and trace elements (magnesium, iron, calcium) to assess the degree of maldigestion;
- stool analysis for fecal calprotectin;
- blood test for ASCA and ANCA antibodies for differential diagnosis with ulcerative colitis;
- Ultrasound of the abdominal organs to detect hepatomegaly, splenomegaly, abdominal lymphadenopathy;
- fibrogastroduodenoscopy to exclude proximal lesions in Crohn's disease, erosive and ulcerative changes;
- fibrocolonoscopy with biopsy to detect granulomas, as well as massive lymphoid infiltration of all layers of the intestinal wall - the appearance of cobblestones during fibrocolonoscopy;
- stool test for Mycobacterium tuberculosisfor differential diagnosis with tuberculous intestinal lesions;
- passage of barium through the intestine (there is a narrowing of the distal ileum and, possibly, a change in the wall of the cecum and ascending colon, which is characteristic of Crohn's disease, in which fibrosis of the wall develops with impaired patency).

4.As anti-inflammatory therapy - glucocorticosteroids: Prednisolone 150 mg or more intravenously, then orally - 1 mg/kg of the patient's body weight: for example, 60 mg/day with a gradual reduction in dose to the minimum effective + derivatives 5 - ASA: Mesalazine (Pentasa) 2-6 g per day for a long time. In the absence of contraindications and availability, anti-cytokine therapy is recommended as early as possible: for example, Infliximab, Adalimomab, Golimomab in IV drip courses.

In addition to anti-inflammatory therapy, pathogenetic therapy includes intestinal decontamination: Alpha-normix - 400 mg 3 times a day for 7-14 days, Metronidazole parenterally.

Correction of electrolyte disturbances, treatment of malabsorption, maldigestion. 5. The prognosis of the disease varies significantly and is determined individually. Flow

Crohn's disease can be asymptomatic (if the lesion is localized only in the anus in older people) or occur in an extremely severe form. 13-20% of patients have a chronic course of the disease. With proper treatment, the duration of periods of remission reaches several decades. As an independent disease, Crohn's disease very rarely causes death in patients, and the mortality rate remains extremely low. Typically, patients receiving maintenance therapy live to a ripe old age.

Task 38.

Patient P., 30 years old, complains of sharp pain in the right iliac region, which arose acutely the previous day after a heavy meal at the holiday table. Also concerning are nausea, rumbling in the stomach, unstable stools, and an increase in temperature to 37.3 C.

Palpation of the abdomen reveals moderate local pain, as well as a dense tumor-like formation in this area.

Upon examination, a pararectal fistula was diagnosed in the anal area.

FCS revealed multiple aphthoid ulcers, diffusely located on the hyperemic mucous membrane of the ileum.

1. Name the preliminary diagnosis;

2. What diseases need a differential diagnosis? 3.Name additional examination methods;

4. Determine your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

Sample answer:

1. Diagnosis: Crohn's disease: ileocolitis with damage to the terminal ileum and cecum, penetrating form, complicated by infiltration of the abdominal cavity, perirectal fistula, moderate attack, chronic relapsing course.

2. Differential diagnosis should be carried out with ulcerative colitis, appendicitis, acute intestinal infections, tuberculosis, diverticulitis, and intestinal cancer.

3. Examination plan: general blood and urine analysis, hemocoagulogram, albumin, liver tests, electrolytes, study of CRP, fecal calprotectin, antibodies to Saccharamyces cerevisiae (ASCA) class Ig G and Ig A, perinuclear granulocyte antigens (pANCA). Bacteriological and microscopic examination of stool. Examination of the perianal area, digital examination of the rectum. Ultrasound of the abdominal organs, retroperitoneal space, endoscopy, colonoscopy + ileoscopy with targeted biopsy and histological examination of biopsy specimens, MRI, CT scan with contrast intestines.

4. To induce remission, prednisolone 60 mg per day, azathioprine 2 mg/kg in combination with antibiotics (metronidazole + fluoroquinolones intravenously for 10-14 days) are used. The effectiveness of combination therapy is assessed after 2-4 weeks: when clinical remission is achieved, the dose of prednisolone is reduced until complete withdrawal. Maintenance therapy with azathioprine is carried out for at least 4 years. If there is no effect, biological therapy (infliximab, adalimubab, certolizumab pegol or vedolizumab) is recommended. A consultation with a phthisiatrician is indicated - screening for tuberculosis (R-graphy of the chest organs, quantiferon test, Mantoux test, Diaskin test, control of leukocyte levels. If treatment is ineffective - surgical intervention.

Due to the progressive nature of the disease, patients with Crohn's disease must receive ongoing (lifelong) therapy and undergo regular (lifelong) monitoring of disease activity. Every 3 months, carry out studies of the level of C-reactive protein, fecal calprotectin, a general blood test (in patients receiving immunosuppressants - monthly), every 6 months, ultrasound of the intestine, annually an X-ray or MR examination of the stool, examination of the perianal area, digital examination of the rectum, endoscopic study.

Unfavorable prognostic factors for CD are smoking, onset of the disease in childhood, perianal lesions, penetrating phenotype of the disease, and widespread lesions of the small intestine.

When using immunosuppressants, it is necessary to prevent opportunistic infections. Patients are subject to mandatory vaccination with a recombinant vaccine against HBV, a polyvalent inactivated pneumococcal vaccine, and a trivalent inactivated influenza vaccine. For women under 26 years of age - vaccination against human papillomavirus. It is necessary to follow the principles of hormonal therapy.

Task 39.

Man B., 50 years old, consulted a therapist with complaints of increased fatigue, weakness, dull aching pain in the right hypochondrium, belching of air, nausea, loss of appetite, weight loss and occasional skin itching.

From the anamnesis it is known that the patient has been drinking alcohol (more than 60 g of ethanol per day) for 20 years. Five years ago, aching pain appeared in the area of the right hypochondrium, increased fatigue, nausea, and skin itching, which intensified in the evening. The patient did not seek medical help.

Periodically took antihistamines, baralgin, Creon 25,000 units. twice a day. There was no effect from the medications taken.

A real exacerbation over the past two weeks, when after drinking alcohol, weakness, almost constant dull pain in the right hypochondrium, nausea, belching of air, and loss of appetite appeared. There were no operations or blood transfusions.

On examination: condition is satisfactory. Height 175 cm, weight 79 kg. The skin is icteric in color, the sclera is icteric; Telangiectasias are detected on the face, chest, back, and shoulders. In the lungs, breathing is vesicular, there are no wheezes. BH – 16 per minute. Heart sounds are muffled, the rhythm is correct. Heart rate – 69 per 1 min; Blood pressure - 125/80 mm Hg. The tongue is wet and covered with a white coating. The abdomen is soft, and on superficial palpation it is moderately painful in the area of the right hypochondrium. Dimensions of the liver according to Kurlov: 9(+3)×8×7 cm. On deep palpation, the liver has a dense consistency and moderate pain is detected. The spleen is not palpable. There is no dysuria. The symptom of tapping in the lumbar region is negative.

Research results:

Complete blood count: red blood cells – 4.4×10^{12}/l; leukocytes – 6.5 × 109/l; segmented neutrophils – 63%; band neutrophils – 1%; lymphocytes – 29%; monocytes
- 4%; eosinophils – 2%; basophils – 1%; Hb – 147 g/l; platelets – 218×109/l; ESR – 20 mm/h.

Blood biochemistry: total bilirubin – 27 µmol/l;indirect bilirubin – 24.5 µmol/l; direct bilirubin – 2.5 µmol/l; ALT – 215 U/L; AST – 218 units/l; GGTP – 89 units/l; alkaline phosphatase – 279 units/l; TG – 3.9 mmol/l; LDL cholesterol – 2.9 mmol/l; HDL cholesterol – 1.4 mmol/l; glucose –5.1 mmol/l; creatinine – 65 µmol/l; urea – 2.9 mmol/l; albumin – 44 g/l; total protein
– 72.5 g/l; alpha-1-globulins – 3.3 g/l; alpha-2-globulins – 5.7 g/l; beta globulins – 7.2 g/l; γ-globulins – 12.5 g/l; alpha-fetoprotein – 3.1 units/l; ferritin – 55 mcg/l; transferrin
– 2.7 g/l; potassium – 3.7 mmol/l; Na– 139.5 mmol/l; iron – 22.5 µmol/l; amylase – 45 units/l; CS – 5.4 mmol/l. PTI – 86%.

Enzyme immunoassay (blood test for markers of hepatitis B, C): HBsAg (-
); anti-HBs (-); anti-HBcIgG (-); HBeAg(-); anti-HBe (-); anti-HBcIgM (-); anti-HCV – negative

Liver elastometry: stage F2 (according to the METAVIR scale), moderate fibrosis. Feces for occult blood - negative.

X-ray examination of the lungs: no pathological changes. ECG – without pathological changes.

General urine analysis: within normal limits.

1.Suggest the most likely diagnosis; 2. Justify the diagnosis;

3.Draw up and justify a plan for additional examination of the patient; 4. Prescription of treatment.

Sample answer:

1.Preliminary diagnosis: Chronic hepatitis of alcoholic etiology, moderate degree of activity, stage F2 (moderate fibrosis).

2.The diagnosis of "chronic alcoholic hepatitis" was established on the basis of the patient's complaints of general weakness, increased fatigue, dull aching pain in the right

hypochondrium, nausea, loss of appetite, periodic skin itching; medical history (the patient has been abusing alcohol for 13 years); data from an objective examination (yellowness of the skin, icterus of the sclera, presence of telangiectasia in the patient,
"palmar" erythema, hepatomegaly).

The diagnosis of “chronic alcoholic hepatitis” is confirmed by laboratory data (increased ALT, AST, GGTP, total bilirubin, alkaline phosphatase, as well as increased triglyceride levels).

Other (viral) etiology of chronic hepatitis is excluded: blood test for markers of hepatitis B, C: HBsAg (-); anti-HBs (-); anti-HBcIgG (-); HBeAg(-); anti-HBe (-); anti-HBcIgM (-); anti-HCV negative.

The degree of activity of chronic alcoholic hepatitis was determined on the basis of an increase in the level of ALT and AST (5 times compared to the norm). The stage of chronic alcoholic hepatitis F2 was established based on liver elastometry data (according to the METAVIR scale), moderate fibrosis.

3.Ultrasound of the abdominal cavity and retroperitoneal space (to exclude focal liver formations, signs of portal hypertension, concomitant pathology); fibroesogastroduodenoscopy (FEGDS) – to identify and/or determine the condition of the veins of the esophagus and/or stomach; duplex scanning of the vessels of the hepatosplenic basin to identify signs of portal hypertension.

4.Prescription of treatment

1.Diet is recommended. Avoid alcohol, fatty, fried, spicy, smoked, salty, coffee, carbonated drinks, cocoa.

It is advisable to prescribe a diet rich in proteins (at least 1 g per 1 kg of body weight), with high energy value (at least 2000 kcal/day), with a sufficient content of vitamins (especially group B, folic and lipoic acids) and microelements - zinc and selenium, deficiency of which is most often observed with alcohol abuse.

2.The patient is prescribed ademetionine (Heptral), first parenterally, 5-10 ml (400-800 mg) intravenously or intramuscularly for 10-14 days, and then 400-800 mg (1-2 tablets) 2 times a day. The duration of treatment is on average 2 months.

Ademetionine acts as an antioxidant, has a detoxifying effect, accelerates the regeneration of liver tissue and slows down the development of fibrosis. An important aspect of the use of this drug is its antidepressant effect.

The use of exogenous ademetionine makes it possible to reduce the accumulation and negative effects of toxic metabolites on hepatocytes, stabilize the viscosity of cell membranes, and activate the work of enzymes associated with them.

3.Metadoxine is recommended, which has a hepatoprotective effect, prevents the accumulation of triglycerides in hepatocytes, prevents the formation of fibronectin and collagen, which significantly slows down the process of formation of liver cirrhosis, helps accelerate the process of removing ethanol and acetaldehyde from the body, reduces the mental and somatic manifestations of hangover syndrome, reduces the time of relief of withdrawal symptoms syndrome, improves the functions of thinking and short memory, prevents the occurrence of motor excitation, which is caused by ethanol, and also reduces the craving for alcohol.

Treatment with metadoxine begins with intravenous, once daily administration of 600–1200 mg of the drug, lasting up to 4 weeks, followed by transition to oral administration of 1000–1500 mg/day, lasting up to 3 months.

4.The patient is recommended to prescribe essential phospholipids, milk thistle preparations, L-ornithine, L-arginine, taurine.

Observation by a gastroenterologist in the first year every 3 months, in the 2nd year - every 6 months, in subsequent years, if the process stabilizes - once a year.

Task 40.

Patient A., 30 years old, at a therapist's appointment complains of general weakness, fatigue, lack of appetite, heaviness in the right hypochondrium, itching and an increase in body temperature to 37.7 °C.

The patient considers herself sick for several years, when weakness first appeared, fatigue began to increase, and performance decreased. Over the course of a year, he has been bothered by heaviness in the right hypochondrium, skin itching, and menstrual dysfunction. She periodically noted pain in the knee joints and an increase in body temperature to low-grade levels.

Objective examination: general condition is moderate, consciousness is clear. Reduced nutrition (height – 176 cm, weight – 56 kg). The skin has traces of scratching, the face and palms are hyperemic. The sclera are icteric, there are spider veins on the face, chest and neck, and small hemorrhagic rashes on the legs. Peripheral lymph nodes are not palpable. In the lungs there is vesicular breathing, no wheezing. BH - 20 per minute. The boundaries of the heart are within normal limits. Heart sounds are clear, the rhythm is correct. Pulse 86 beats per minute. Blood pressure - 120/80 mm Hg. Art. The tongue is moist, slightly coated with a yellowish coating. The abdomen is soft, moderately painful in the right hypochondrium. The liver protrudes 4 cm from under the edge of the costal arch, the edge is painful, with a dense elastic consistency. The spleen is not enlarged. The symptom of tapping in the lumbar region is negative.

Complete blood count: red blood cells 3.9×1012/l, hemoglobin – 122 g/l, leukocytes 6.3×109/l, ESR – 55 mm/h.

Biochemical blood test: bilirubin - 120.0 μmol/l (direct - 88.0 μmol/l, indirect - 32.0 μmol/l), cholesterol - 7.9 mmol/l, albumin - 36%, γ-globulins - up to 3 upper limit of normal (ULN), increase in ALT - up to 7 ULN, AST - up to 6 ULN, alkaline phosphatase - up to 2 ULN, glucose - 5.5 mmol/l, serum iron - 25 μmol/l, LE cells in low titer, tissue antibodies to smooth muscle (SMA) - 1: 160. Markers of viral hepatitis B, C and D are negative.

1.What is the most likely diagnosis? 2.

Justify the diagnosis;

3. Justify the purpose of treatment for this patient.

Sample answer:

1.Preliminary diagnosis: Autoimmune hepatitis with moderate activity, type 1.

2.The diagnosis was made on the basis of: the patient's complaints of weakness, fatigue, lack of appetite, heaviness in the right hypochondrium, itching, increased body temperature to 37.7 °C; objective examination data: hyperemia of the palms, icterus of the sclera, the presence of spider veins on the face, chest and neck, hepatomegaly, hemorrhagic rashes.

Laboratory tests: hyperbilirubinemia, increased ALT, AST, alkaline phosphatase, γ-globulins, high titer of tissue antibodies to smooth muscle (SMA) (1:160).

3.A patient with autoimmune hepatitis has absolute indications for drug therapy: severe symptoms, AST ≥ 5 ULN + γ-globulin ≥ 2 ULN. It is recommended to use one of the following schemes:

Scheme 1. Prednisolone (daily doses): 1 week - 60 mg, 2 week - 40 mg, 3 week - 30 mg, 4 week - 20 mg, then reduce the dose by 2.5-5 mg/week to maintenance 2.5 -10 mg/day.

Scheme 2. Prednisolone 1 week - 30 mg, 2 week - 20 mg, then reduce the dose by 2.5-5 mg/week to a maintenance dose of 2.5-10 mg/day. Azathioprine 50 mg continuously after 1 week.

Treatment should continue for a minimum of 3 years and for at least 24 months after complete normalization of serum aminotransferase activity and IgG levels.

The patient should be vaccinated against hepatitis A and B, as well as an annual influenza vaccination.

Task 41.

The patient is 18 years old. According to her mother, she has been suffering from jaundice since early childhood, and from the age of 12, paroxysmal pain appeared in the right hypochondrium, accompanied by increased jaundice.

Objectively: General condition is satisfactory. Subictericity of the sclera and skin. The chest organs are unremarkable. The abdomen is soft, painless on palpation. The liver and spleen are not enlarged.

Blood and urine tests are unchanged.

Bilirubin - 32.1 mmol/l, indirect - 28.5 mmol/l, AST - 0.32 mmol/l, ALT - 0.40 mmol/l.

1) Formulate a preliminary diagnosis;

2) How to explain the appearance of jaundice?

3) What other jaundice should be excluded?

4) Treatment tactics.

Sample answer:

1. Preliminary diagnosis: Benign hyperbilirubinemia disease
   Gilbert.
2. Impaired uptake of free bilirubin from hepatocyte plasma,
   defectconjugation of bilirubin with glucuronic acid by liver cells.
3. Hemolytic/reticulocytosis, osmotic resistance of erythrocytes,
   glandblood serum.
4. Diet: table No. 5, phenobarbital.

Task 42.

Woman S., 48 years old. Previously, she often took antidepressants. For 2 years, he has been experiencing intolerance to fatty foods, dull pain in the right hypochondrium, periodically diffuse itching, bone pain, pain and swelling of the wrist, knee, interphalangeal joints, tooth loss, xanthelasma and dark brown pigmentation of the nails. For the last 3 months, increasing jaundice, dark urine.

The liver is 5 cm, dense, the edge is rounded. Spleen - 16×12 cm.

Blood test: bound bilirubin – 144 nmol/l, free – 57 μmol/l, AST – 216 nmol/l, ALT – 283 nmol/l, alkaline phosphatase – 222 μmol/l, cholesterol – 9.1 mmol/l, prothrombin – 65%, γ-globulins – 22%, AMA titer 1:80.

1. What is the leading syndrome in this patient?
2. What diseases should be differentially diagnosed? 3.Formulate a preliminary diagnosis.
4. What can contribute to the development of the disease?

Sample answer:

1. Cholestasis syndrome.
2. Differential diagnosis should be carried out with the following diseases: secondary biliary cirrhosis, liver cancer, rare forms of liver cirrhosis: veno-occlusive cirrhosis, cirrhosis with Budd-Chiari syndrome, Wilson-Konovalov disease.
3. Diagnosis: Primary biliary cirrhosis of the liver.
4. Taking antidepressants.

Task 43.

Patient A., 48 years old, complains of itchy skin, menstrual irregularities, yellowness of the skin, decreased appetite, weight loss, discomfort in the right upper quadrant of the abdomen.

Considers himself sick for 4 years. She was treated by a dermatologist for neurodermatitis and by a gynecologist for menopausal ovarian dysfunction.

The examination revealed subicteric sclera, pigment spots and multiple scratch marks on the skin of the body. In the lungs, breathing is vesicular, there are no wheezes. BH – 18 per minute. Heart sounds are clear and rhythmic. Heart rate – 78 beats per minute. The liver protrudes from under the edge of the costal arch by 7 cm, the edge is dense and painless. The spleen is not palpable. There is no dysuria. The effleurage symptom on both sides is negative.

Biochemical blood test: total bilirubin – 87.5 μmol/l, alkaline phosphatase – 413 U/l, GGTP – 62 U/l. In the general blood test: ESR – 25 mm/hour.

1. Make the most likely diagnosis;
2. What studies are needed to confirm the diagnosis? 3.What treatment should be prescribed to the patient?

Sample answer:

1. Preliminary diagnosis: Primary biliary cirrhosis.
2. To confirm the diagnosis, the following studies are necessary:

-General blood analysis.

-Biochemical blood test: total bilirubin and its fractions, AST, ALT, alkaline phosphatase, GGTP, total protein, protein fractions, cholesterol, urea, creatinine, coagulogram, fibrinogen.

-General urine analysis.

-Ultrasound of the liver, gallbladder, pancreas, spleen and vessels of the portal system.

-Fibroesophagogastroduodenoscopy.

- Serological blood test for the presence of antibodies to hepatitis B, D and C viruses to exclude possible viral hepatotropic infections.

3. Treatment.

-The diet should be physiologically complete in terms of protein content (1.2-1.4 g/kg), carbohydrates (4-5 g/kg), with moderate restriction of fats (up to 1.2 g/kg) due to vegetable oils, rich in omega-6 fatty acids. It is necessary to enrich the diet with antioxidants, vitamins A, E, C, B5, calcium salts, lecithin, omega-3 fatty acids, and fiber.

- Ursodeoxycholic acid (UDCA) at a dose of 13 - 15 mg/kg/day once in the evening or in two doses. If standard doses of UDCA are ineffective, high doses of the drug can be used - 20 mg/kg/day.

- Glucocorticosteroids (GCS) - prednisolone at a dose of 20-30 mg/day for 8 weeks with a gradual reduction in dose to 8-10 mg/day.

-The following drugs are used to treat skin itching: Phenobarbital, cholestyramine (4-16 g/day) or cholestipol (5-30 g/day).

Task 44.

Patient S., 72 years old, a pensioner, went to the clinic to see a local general practitioner with complaints of dull, aching, low-intensity pain and a feeling of heaviness in the epigastric region 15-20 minutes after eating, nausea, and heartburn. Painful sensations intensify with errors in nutrition. Periodically, shortness of breath and pressing pain in the chest, which occurs during moderate physical exertion (climbing to the 2nd floor), are disturbed by taking nitramin and when the exercise stops.

From the anamnesis: pain in the epigastric region has been bothering me for the last 4-5 weeks, somewhat decreasing after taking noshpa and almagel. About a week ago, the patient noted an episode of black stools for 2 days. At the age of 49 years, he was diagnosed with duodenal ulcer, was treated in a hospital, and subsequent exacerbations of the disease were never recorded. The patient has not consulted a doctor about this for the past 10 years. The patient suffers from coronary artery disease, suffered a myocardial infarction 1.5 years ago, and 10 months ago underwent stenting of the coronary arteries (2 stents were installed).

The patient is receiving drug treatment for ischemic heart disease, including thrombo-ass and clopidogrel, and has stopped taking Crestor for the last 5 months.

On examination: the condition is satisfactory, BMI – 27 kg/m2, the skin and visible mucous membranes are pale pink in color. The shins are pasty. Breathing is vesicular in all parts, there is no wheezing. BH – 18 per 1 minute. Heart – tones are muffled, accent of 2 tones is on the aorta, the rhythm is correct. Heart rate – 92 per minute. Blood pressure – 130/85 mm Hg. The abdomen participates in breathing, is soft on palpation, moderate pain is detected in the epigastrium along the midline of the body and in the pyloroduodenal zone, the remaining parts of the abdomen are painless. Blistering symptoms are negative. Dimensions of the liver and spleen according to Kurlov: 11×9×8 cm and 6×4 cm, respectively. The edge of the liver of a dense elastic consistency is determined 2 cm below the costal arch, painless. Palpation of the colon is painless. The symptom of effleurage in the lumbar region is negative.

In the tests: red blood cells - 3.11×1012/l, Hb - 103 g/l, MCH - 22p/g, MCHC – 300 g/l, leukocytes - 5.6×109/l. ESR - 8 mm/hour.

Total cholesterol - 7.8 mmol/l, triglycerides - 2.6 mmol/l.

ECG: sinus rhythm, 72 per minute; RI> RII> RIII, in leads I, avL, v1-4, the Q wave is > 1/3 of the R wave, the T wave is negative.

1.Suggest the most likely diagnosis; 2. Justify the

diagnosis;

3.What additional research methods would be prescribed for this patient?4. Determine a plan for managing the patient using medications

And

non-drug treatment methods;

5. Indicate the drugs from the group of proton pump inhibitors that you would choose in this case. Justify your choice. Specify the dosage of medications. Select an eradication therapy regimen.

Sample answer:

1.NSAIDs – associated gastropathy: erosive and ulcerative lesions of the stomach,complicated by existing gastrointestinal

bleeding.Mild posthemorrhagic anemia. IHD: stable angina pectoris class II, PICS along the anterior wall and apex of the LV. Stenting of LCA, LCA, CHF III FC (NYHA)

2.A patient suffering from coronary artery disease and receiving dual antiplatelet therapy (DAPT): Aspirin and Clopidogrel, has several risk factors for the development of NSAID-associated gastropathy (old age, coronary artery disease, a history of duodenal ulcer, treatment for 1.5 years of DAPT, no indications for the use of antisecretory agents during DAPT). NSAID-associated gastropathy is represented by multiple gastroduodenal erosions and/or ulcers, characterized by a mild or asymptomatic course and a high frequency of manifestation with the development of complications - bleeding. The patient has convincing diagnostic criteria for the specified diagnosis: gastric dyspepsia syndrome, an episode of gastrointestinal bleeding, the presence of clinical signs of anemia (tachycardia, decreased levels of hemoglobin, red blood cells, decreased MCH and MCHC levels in a general blood test).

3.In addition to the examination, the patient was recommended: fibrogastroduodenoscopy with a biopsy of the gastric mucosa from the affected area (ulcerative defect) and standard biopsy areas in order to assess the stage of gastritis, clarify the nature of the lesion of the mucous membrane of the gastroduodenal zone; diagnosis of the presence of H. pylori infection using a morphological method, or detection of H. pylori antigen in stool using enzyme immunoassay, or detection of H. pylori DNA in stool using polymerase chain reaction. The use of the serological method is inappropriate, because It is unknown whether eradication therapy for duodenal ulcer has been performed in the past. In accordance with the Standard of Medical Care for

For gastric and duodenal ulcers, a biochemical blood test (bilirubin, ALT, AST, glucose, as well as serum iron, total iron-binding capacity of serum, ferritin), ultrasound examination of internal organs, and stool analysis for occult blood are recommended.

4.The choice of treatment tactics, including the decision on the need for hospital treatment, should be made taking into account the results of the endoscopic examination of the patient. The standard of treatment for NSAID-associated gastropathy is the prescription of antisecretory therapy in order to correct aggressive factors affecting the gastric mucosa. The drugs of choice are proton pump inhibitors (PPIs), used in standard doses in the acute stage of the pathological process in the gastroduodenal zone and in maintenance doses as a prophylactic agent. The patient is indicated for continuous PPI therapy in combination with continuous DAPT.

During the period of acute manifestations of NSAID gastropathy in combination with PPIs, therapy with gastroprotectors (Bismuth tripotassium dicitrate, Rebamipide, Sucralfate) in courses of at least 4 weeks is indicated.

If infection with H.pylori infection is indicated for the patient to eradicate the infection in order to reduce the risk of ulcerogenic effects on the mucous membrane of the gastroduodenal zone with ongoing therapy with Aspirin and Clopidogrel.

The patient is indicated for continuous therapy for coronary artery disease: in addition to DAPT, it is recommended to take a lipid-lowering agent (Atorvastatin, Rosuvastatin), a selective b-blocker (Bisoprolol), an ACE inhibitor (ramipril or perindopril) and an aldosterone antagonist (veroshpiron) due to the presence of symptoms of heart failure and with taking into account blood pressure levels.

If sideropenia is detected, therapy with iron supplements is indicated until the level of normal hemoglobin values is achieved.

Drug therapy should be carried out against the background of dietary therapy. A diet is indicated within the framework of table 1 during the period of exacerbation for 4-6 weeks, followed by individual expansion within the framework of table 5p.

5.When choosing a PPI, you should be guided by information about drug interactions between drugs. Taking into account the need to use combination therapy that includes Clopidogrel, you should choose PPIs with the least drug interactions: the optimal choice is Pantoprazole 40 mg 2 times a day or Rabeprazole 20 mg 2 times a day for at least 4 weeks, then the PPI drug can be used at half the dose.

As a scheme for eradication of H. pylori infection, it is possible to use 10-day triple therapy with the addition of Bismuth tripotassium dicitrate, followed by prolongation of the cytoprotector course to 4 weeks.

It is advisable to repeat four-week courses of cytoprotectors (Rebamipide) 3-4 times a year.

Task 45.

Patient T., 48 years old, an electric welder, consulted a local general practitioner with complaints of frequent, severe heartburn after eating and at night, especially when eating spicy, fatty or rich foods, frequent nausea in the morning, belching of food after eating, usually, when bending the body and lying down, poor sleep due to heartburn.

From the anamnesis: from school age he noticed abdominal pain and poor appetite. He was treated independently, on the advice of relatives, periodically taking No-shpu and enzyme preparations with little effect. While serving in the army, he was treated in hospital for gastritis. Subsequently, he had no complaints from the digestive organs for a long time. He eats irregularly, works in shifts, and regularly has night shifts. Smokes

from 13 years old, 20 cigarettes a day. He practically does not drink alcohol. The described complaints appeared two years ago after a long period of significant physical exertion (building a house) and an episode of severe psycho-emotional stress (a fire in an apartment). I took almagel and omez on my own for 10-14 days with good effect. Over the next 2 years, I was often bothered by heartburn, but I did not consult a doctor; I used Almagel and Omez in short courses with a short-term effect. The last deterioration occurred within a month after an error in diet and alcoholism; After taking the usual set of medications for a week, my health showed positive dynamics, and therefore I stopped treatment. After 5 days the symptoms returned. Three days ago there was a single episode of black, loose stool. Subsequently, the stool was without any peculiarities.

On examination: condition is satisfactory.

Height – 175cm, weight – 63 kg. The skin is of physiological color, moderate moisture, clean. Vesicular breathing in the lungs. BH – 18 per minute. Heart sounds are moderately muffled, the rhythm is correct. Heart rate – 80 per minute, blood pressure – 130/85 mm Hg. The tongue is thickly covered with a gray coating and is moist. The abdomen is soft, moderately painful high in the epigastrium to the left of the midline and in the pyloroduodenal area. Palpation of other parts of the abdomen is practically painless. Liver 10.5×8×7 cm. The edge is rounded, elastic consistency, painless. Blistering symptoms are negative. The spleen is not palpable, percussion 7×5 cm. The symptom of tapping in the lumbar region is negative.

In the tests: red blood cells – 4.0×1012/l, hemoglobin – 122 g/l, MCH – 26p/g, MCHC – 346 g/l, leukocytes – 5.2×109/l: basophils – 0%, eosinophils – 1%, band cells – 2%, segmented cells – 68%, lymphocytes – 23%, monocytes – 6%. ESR – 5 mm/hour.

A stool occult blood test is positive.

FGDS - the esophagus is passable. The mucous membrane of the lower third of the esophagus is clearly hyperemic with multiple small erosions occupying up to half the diameter of the esophagus. The cardiac sphincter does not close completely. The gastric mucosa prolapses into the esophagus. The stomach contains a significant amount of secretion mixed with bile. The mucous membrane of the body of the stomach is slightly swollen, pink, with trunk-type folds. The antrum mucosa is focally hyperemic with multiple flat erosions. The pylorus is gaping. The duodenal bulb is not deformed. The mucous membrane is pink and shiny. The postbulbar region is without features.

1.Suggest the most likely diagnosis; 2. Justify the

diagnosis;

3.What additional research methods would be prescribed for this patient?4. Determine a plan for managing the patient using medications

And

non-drug methods;

5.Draw up a specific drug treatment regimen for this patient, indicating doses and duration of administration. Choose a maintenance therapy regimen. Select an eradication therapy regimen. Justify your choice. Determine the timing of the control endoscopic examination. Make a decision on assessing the patient's ability to work.

Sample answer:

1.GERD: erosive esophagitis stage 2 according to Savari-Miller. Cardia failure. Sliding hiatal hernia, stage 1. Chronic antral gastritis with erosions in the acute stage (Hp status unknown).

Episode of spontaneously stopped bleeding from the upper gastrointestinal tract from (date). Pylorus deficiency.

2.The diagnosis of GERD was established on the basis of the patient’s complaints of frequent and severe heartburn, belching of food, which worsened when lying down and when bending over; anamnestic data indicating the connection between the appearance of pronounced

clinical symptoms with significant physical exertion and psycho-emotional stress; based on FGDS data describing an almost classic endoscopic picture of the erosive form of GERD. The stage of the disease was determined based on the results of endoscopic examination of the esophagus. Diagnosis
“chronic gastritis” was also confirmed endoscopically. An episode of melena that occurred, which resolved spontaneously, did not lead to a decrease in hemoglobin levels, but is a sign of a high risk of recurrence of this complication in the absence of adequate treatment.

3.In addition to the examination, the patient is recommended to diagnose H. pylori infection using a non-invasive method (detection of antibodies to the H. pylori antigen in blood serum, detection of H. pylori antigen in stool using ELISA, or detection of H. pylori DNA in stool using PCR). The use of the serological method is possible, since it is known that the patient has not undergone eradication therapy for H. pylori infection. Fluoroscopy of the esophagus and stomach is indicated in order to clarify the size of the hiatal hernia, daily monitoring of intraesophageal and intragastric pH in order to clarify the nature of the reflux in connection with the presence of duodenogastric reflux in the patient.

4.Treatment can be carried out on an outpatient basis with the patient's obligatory observance of special recommendations on lifestyle (compliance with diet and diet, a diet within the framework of table 1 is indicated during an exacerbation for 4-6 weeks, followed by individual expansion within the framework of table 5p, smoking cessation, should avoid conditions accompanied by increased intra-abdominal pressure, etc.). The standard of treatment for GERD is the prescription of antisecretory therapy to correct aggressive factors affecting the mucous membrane of the esophagus and stomach: the drugs of choice are proton pump inhibitors. A decrease in acid production is considered the main factor promoting the healing of erosive and ulcerative lesions. For the treatment of erosive esophagitis in the presence of stage 2 or greater esophagitis, PPIs are prescribed in standard doses for at least 8 weeks. Maintenance therapy after healing of erosions should be carried out for 16-24 weeks. If an H. pylori infection is detected, the patient is indicated for eradication of the infection. In order to correct disorders of the motor function of the upper digestive tract, the patient is shown prokinetics. It is advisable to use antacids and alginates situationally and as a course of treatment. In the treatment of an erosive process in the stomach, the patient is shown cytoprotectors (Bismuth tripotassium dicitrate, Rebamipide, Sucralfate) for at least 4 weeks.

5.Taking into account the need to achieve the fastest possible effect: persistent relief of clinical symptoms of the disease, the optimal PPI is Rabeprazole at a dose of 20 mg 2 times a day 30-40 minutes before meals for 8 weeks. Itopride hydrochloride 50 mg 3 times a day 25-30 minutes before meals for 4 weeks. Gaviscon 1 sachet 3 times a day an hour after meals and before bed for 4 weeks. As a scheme for eradication of H. pylori infection, it is possible to use 10-day triple therapy with the addition of Bismuth tripotassium dicitrate, followed by prolongation of the cytoprotector course to 4 weeks. Maintenance therapy using half the dose of PPI should continue in this case for up to 24 weeks (the duration of therapy can be adjusted taking into account the results of the control endoscopic examination). Control FGS should be carried out after 8 weeks of treatment.

Taking into account the severity of the clinical manifestations of GERD and the patient’s profession, he should be recognized as temporarily disabled and a certificate of incapacity for work should be issued for a total duration of at least 3 weeks.

Task 46.

Man A., 56 years old, is in the clinic with a diagnosis of liver cirrhosis and portal hypertension. The condition began to progressively worsen. Moderate tachycardia and normal blood pressure were replaced by severe tachycardia and a decrease in blood pressure to 75/40 mm Hg. Dyspnea increased and diuresis decreased significantly. The skin is pale, cold to the touch, profusely covered with sticky cold sweat. Heart sounds are muffled. The pulse is very rapid and weak. Central venous pressure 11 mm water column. Bloody vomiting was noted twice. Hb dropped to 52 g/l, Ht – 21%.

1.Formulate and justify the presumptive diagnosis; 2.What additional examination methods should be carried out?

3.What are the treatment methods? When is blood transfusion necessary?

Sample answer:

1.Bleeding from the veins of the esophagus. Hemorrhagic shock. 2.Endoscopy.

3.Blackmore probe. The use of blood products during antishock therapy. Use of aminocaproic acid, adroxone, tranexamic acid, fresh frozen plasma. Transfusion of blood products when hemoglobin decreases below 80 g/l and hematocrit below 30.

Task 47.

Man E., 42 years old, felt severe pain in the upper abdomen, which he compared to the blow of a dagger. The pain appeared during physical activity, there was no vomiting. He has been suffering from stomach ulcers for many years, for which he has been treated in therapeutic clinics many times. An ambulance was called, and the paramedic who arrived examined the patient. The patient is pale, covered with cold sweat, a pained expression on his face, a forced position - lying on his side, legs brought to his stomach, pulse 80 beats. per minute, the tongue is dry, coated with a slightly white coating. The abdomen does not participate in the act of breathing; palpation reveals sharp muscle tension, soreness, and a positive Shchetkin-Blumberg sign.

1. Formulate a presumptive diagnosis and justify it;

2. Name the additional symptoms necessary to clarify the diagnosis; 3.Draw up and justify an algorithm for providing emergency care; 4.Draw up a diagnostic and treatment program in the hospital.

Sample answer:

1. Diagnosis. Perforated gastric ulcer.

The diagnosis was made based on the patient's complaints: during physical activity, the patient felt severe pain in the upper abdomen (a dagger strike). The position of the patient on his side with his legs brought to the stomach is also characteristic of perforation. The results of an examination of the abdomen also support the proposed diagnosis: the anterior abdominal wall does not participate in the act of breathing, palpation is sharply painful, the abdominal muscles are tense, the Shchetkin-Blumberg sign is positive.

2. Additional symptoms

Additionally, you can check the symptom of smoothness or absence of hepatic dullness, which is explained by the entry of air into the abdominal cavity through the perforation of the stomach wall. This symptom is almost always determined by perforation of a gastric ulcer. In sloping areas, it is possible to determine the dullness of percussion sound due to the entry of liquid gastric contents into the abdominal cavity. Digital rectal and vaginal examination may reveal tenderness of the pelvic peritoneum.

3. Emergency care algorithm.

1) exclude enteral administration of fluids and food;

2)call an ambulance to transport the patient to the emergency surgery department;

3)administer cardiac and respiratory analeptics as indicated. Do not administer analgesics!

4)apply cold to the stomach;

5)insert a thin nasogastric tube. It is advisable to remove the stomach contents using a tube;

6)to transportin a lying position with legs slightly bent at the knees and hip joints.

Administration of medications other than analgesics, depending on the patient's condition. Cold will reduce pain and the development of the inflammatory process, so it is advisable to use it at the prehospital stage.

Transport only in a lying position in a position that is rational for the patient. 4.Diagnostic and treatment program in a hospital.

Blood and urine tests are performed (changes depend on the duration of the disease). If the clinical picture is unclear, additional studies are performed:

1) survey Re-graphy to detect the "sickle of clearing" above the liver; 2) laparoscopy.

Treatment is surgical.

The extent of the operation depends on the time since the perforation, the general condition of the patient, the qualifications of the surgeon, the characteristics of the ulcer history, the nature of the ulcer, etc.

Task 48.

Calling a local therapist to a 20-year-old patient on the 3rd day of illness. Complaints of constant pain throughout the abdomen, which at the beginning of the disease were localized in the right iliac region.

Objectively: the condition is serious, body temperature is 38.7 0C. Repeated vomiting of stagnant contents. Facial features are pointed, skin is pale. The mucous membranes are dry, the tongue is covered with a gray coating. Pulse 120 beats per minute. The abdomen is swollen and does not participate in the act of breathing. On palpation there is widespread pain and muscle tension throughout the entire anterior abdominal wall.

1.Formulate and justify the presumptive diagnosis;

2.Name additional physical examination methods to clarify the diagnosis and tell us about the method of their use;

3.Draw up and justify an algorithm for providing emergency care to a patient;

Sample answer:

1. Diagnosis: Acute diffuse peritonitis of appendicular etiology. Placed on the basis of:

a) anamnesis and complaints of pain throughout the abdomen, which were initially localized in the right iliac region (appendiceal peritonitis), the duration of the disease was the third day, corresponding to the toxic period of the disease;

b) objective research:

- local symptoms: abdominal pain, both independent and palpable, muscle tension of the entire anterior abdominal wall, bloating, lack of participation of the abdomen in the act of breathing;
- general symptoms: severe symptoms of intoxication and dehydration: repeated vomiting, hyperthermia, tachycardia, scissors symptom, pale skin, dry mucous membranes, sharpened facial features, coated tongue lead to a severe general condition of the patient.

Vomiting and bloating indicate the development of intestinal paresis.

2.Additional physical examination methods

To confirm the diagnosis, it is necessary to identify symptoms of peritoneal irritation that are reliable for peritonitis.

The Shchetkin-Blumberg symptom is a sharp pain on palpation, intensifying when the hand is suddenly removed from the abdominal wall.

Voskresensky's symptom (shirt) is a sharp increase in pain at the end of the movement of the researcher's hand, quickly sliding along a stretched shirt, from the xiphoid process to the left and then the right iliac region.

Razdolsky's symptom is a sharp increase in pain from the anterior abdominal wall with light percussion with the tips of the bent fingers.

3.Algorithm for providing emergency care

A patient with peritonitis has life-threateningindications require emergency surgical intervention, for which he is urgently hospitalized in the emergency surgery department.

Necessary:

a) apply an ice pack to the anterior abdominal wall (reduce pain, slow down the development of a purulent-infectious process).

b) insert a thin nasogastric tube for aspiration of gastric contents (prevention of vomiting, reduction of endotoxicosis).

c) transport the patient on a stretcher in a lying position.

d) carry out oxygen therapy through nasal catheters in an ambulance (reducing the symptoms of respiratory failure, improving blood oxygenation, redox processes in the body).

Contraindicated:

- administration of analgesics (mask clinical symptoms).
- applying heat to the abdomen (activates the purulent-inflammatory process).
- the use of drugs and fluids enterally (provokes vomiting).
- the use of enemas (worsen the general condition, provoke perforationintestines).

Task 49.

Patient S., 44 years old, complains to the therapist about yellowing of the sclera and skin, weakness, dark urine, aversion to food, and mild nausea.

Considers himself sick for about 14 days. During this time, the body temperature remained in the range of 37.1–37.4 ℃, joints ached, appetite disappeared, and in the last 3 days he noted dark urine, yellowness of the sclera and skin. I took analgin and vitamins. Three months ago I was treated in the neurological department for a functional disorder of the nervous system, receiving medications in the form of tablets, subcutaneous and intravenous injections.

The general condition is moderate. Body temperature 36.9 °C.

Objectively: the sclera and skin are moderately icteric. Peripheral lymph nodes are not changed. Pulse – 55 beats per minute, blood pressure – 110/60 mm Hg. Art. Vesicular breathing. The abdomen is soft, slightly painful in the epigastrium. The liver protrudes from under the edge of the costal arch by 3 cm, the lower pole of the spleen is palpated. Urine is dark brown, feces are gray.

1.Establish a preliminary diagnosis based on the data obtained, taking into account the syndromic approach and justify it;

2.Give an etiological description of the pathogen that allegedly caused the disease, and also name the sources of infection and routes of infection;

3.Indicate the main methods of laboratory diagnostics;

4.Name the diseases for which differential diagnosis is necessary.

Sample answer:

1.The patient has infectious intoxication syndrome, atralgic syndrome (joint pain), dyspeptic syndrome (decreased appetite, mild nausea); cholestatic syndrome (yellowness of the skin and sclera, dark urine, acholic stool); hepatosplenomegaly. Taking into account the epidemiological data (the presence of an injection during a period that fits the incubation period), it can be assumed that the patient has acute viral hepatitis, with a parenteral mechanism of transmission (B or C), an icteric form, a peak period, a moderate course.

2.Hepatitis B virus (HBV) is a DNA virus. The hepatitis B virus is highly resistant in the external environment. At a temperature of -20°C it can be stored for years. It is inactivated only at high temperatures by autoclaving for 30 minutes and by dry heat sterilization (160°C) for an hour. When treated with a 3-5% chloramine solution, it dies within 60 minutes, and a 3-5% phenol solution inactivates the virus within 24 hours. Hepatitis C virus (HCV) is an enveloped RNA virus measuring 50-60 nm in diameter. The genetic variability of HCV makes it difficult to develop an effective immune response, complicates serological diagnosis, and creates problems in creating a vaccine. Virus C is inactivated at a temperature of +60°C for 30 minutes, at 100°C for 2 minutes. The source of infection is humans. The mechanism of infection is parenteral, sexual, during medical and non-medical manipulations.

3. Plan of laboratory research methods:

1) General blood test. 2)

General urine analysis.

3) Biochemical blood test: bilirubin and its fractions, ALT, AST, alkaline phosphatase, GGTP, cholesterol, fibrinogen, coagulogram, proteinogram.

4) Determination of serological markers of viruses: by ELISA - HBsAg, HBcorAB, HCVAB and HBV DNA and HCV RNA by PCR.

4.Differential diagnosis is carried out with viral hepatitis with a fecal-oral transmission mechanism (A, E), leptospirosis, pseudotuberculosis, yersiniosis, infectious mononucleosis, cholelithiasis, hemolytic and other suprahepatic jaundices.

Task 50.

In patient A., 55 years old, HBsAg was detected in the blood during an examination for epidemic indications.

From the anamnesis it was established that HBsAg was first detected a year ago, when the patient was treated in hospital for gastric ulcer. For several years he has been experiencing rapid fatigue, decreased ability to work, and a feeling of heaviness in the right hypochondrium. Denies previous viral hepatitis.

The condition is satisfactory. Body mass index - 28 kg/m2. The skin is of normal color and clean. In the lungs there is vesicular breathing, no wheezing. Heart sounds are clear and rhythmic. Heart rate - 62 beats per minute, blood pressure - 130/80 mm Hg. Art. On palpation, the abdomen is soft and painless. The liver is 2 cm below the costal arch, dimensions according to Kurlov 12x10x9 cm

A general blood and urine test revealed no abnormalities.

HBsAg +, HBeAg (+), HBV DNA 3000 IU/ml.

A biochemical blood test shows an increase in ALT 5 times higher than normal, AST 4 times higher than normal, with normal values of total protein, prothrombin, cholesterol, urea, creatinine, and bilirubin.

According to ultrasound data of the hepatopancreatoduodenal zone, the diameter of the portal and splenic veins was within normal values. The area of the spleen is 45 cm2. Liver elastography: corresponds to fibrosis F2 (according to the METAVIR scale).

1.What is the most likely diagnosis? 2.

Justify the diagnosis;

3.Draw up and justify a plan for additional examination of the patient;

4.Justify the prescription of drug and non-drug treatment for this patient.

Sample answer:

1.Preliminary diagnosis: Chronic viral hepatitis B HbeAg-positive, moderate activity, stage F2 (according to the METAVIR scale), moderate fibrosis.

2.The diagnosis of "chronic viral hepatitis B" was established based on the patient's complaints of fatigue, decreased ability to work, and a feeling of heaviness in the right hypochondrium. The diagnosis is confirmed by laboratory data: (increased ALT, AST), hepatitis B markers (HBsAg +, HBeAg (+), HBV DNA level 3000 IU/ml.).

The degree of activity of chronic viral hepatitis was determined on the basis of an increase in the level of ALT and AST (5 times compared to the norm).

The stage of chronic viral hepatitis F2 was established based on liver elastometry data (according to the METAVIR scale), moderate fibrosis.

3.Additional examination plan:

1) HCV antibodies and HCD antibodies - to exclude concomitant hepatitis C and B. 2) FEGDS - to identify and/or determine the condition of the veins of the esophagus and/or stomach. 3) Duplex scanning of the vessels of the hepatosplenic basin to identify signs of portal hypertension.

4.Treatment:

1) Non-drug therapy includes following a diet excluding alcohol, fatty, fried, spicy, smoked and salty foods, coffee, carbonated drinks and cocoa.2) Prescription of antiviral therapy is determined by the presence of a patient compensated liver damage, viral replication (HBV DNA 3000 IU/ml), increased ALT and AST levels, signs of fibrosis in the F2 liver based on data liver elastometry (according to the METAVIR scale).

Among nucleoside/nucleotide analogues, entecavir and tenofavir should be preferred because they have high antiviral activity and resistance to them rarely develops. Entecavir (nucleoside analogue of guanosine) orally at a dose of 0.5 mg/day for 48 weeks. ALT activity should be assessed every 3 months during treatment and after its completion. When treating with nucleoside/nucleotide analogues, HBV DNA levels should be monitored every 3 months for at least the first year of treatment.

Task 51.

Man S., 46 years old,complains of general weakness, increased fatigue, decreased performance, almost constant dull pain in the right hypochondrium, nausea and sleep disturbances.

Considers himself sick for two years, when general weakness, increased fatigue, a feeling of heaviness in the right hypochondrium, and periodic increases in temperature to subfebrile levels first appeared. He did not seek medical help. When pain syndrome appeared, I took Essentiale-Forte 2 capsules 3 times a day, enzyme preparations (Creon 10,000 units 2 times a day) and no-shpa. I did not notice any improvement in my health. A real exacerbation during the month, when after suffering from the flu the pain in the right hypochondrium intensified, and general weakness increased. There were no operations or blood transfusions. He does not abuse alcohol, did not take hepatotoxic drugs, and was a donor.

On examination: conditionsatisfactory. Height – 165 cm, weight – 70 kg, BMI – 25.7 kg/m2. The skin is icteric in color, the sclera is icteric, and telangiectasia is detected on the chest, shoulders and back. In the lungs, breathing is vesicular, there are no wheezes, respiratory rate is 16 per minute. Heart sounds are rhythmic and muffled. Heart rate - 74 per 1 min; Blood pressure - 130/80 mm Hg. The tongue is wet and covered with a white coating. The abdomen is soft, moderately painful on palpation in the area of the right hypochondrium. Liver dimensions according to Kurlov: 12(+3)×8×7 cm. With deep palpation

the liver has a dense consistency, moderate pain on palpation is determined. The spleen is not enlarged. There is no dysuria. The symptom of tapping in the lumbar region is negative.

Research results:

Complete blood count: red blood cells – 4.6×10^{12}/l; leukocytes –6.7×x109/l; segmented neutrophils – 63%; band neutrophils – 1%; lymphocytes – 29%; monocytes
- 4%; eosinophils – 2%; basophils – 1%; Hb – 144 g/l; platelets – 242×109/l; ESR – 22 mm/h.

Biochemical blood test: total bilirubin – 36 µmol/l; indirect bilirubin – 30.5 µmol/l; direct bilirubin – 5.5 µmol/l; ALT – 218 units/l; AST – 157 units/l; GGTP – 82 units/l; alkaline phosphatase –142 units/l; glucose – 5.1 mmol/l; creatinine – 64 µmol/l; urea – 3.2 mmol/l; albumin – 38 g/l; total protein – 70.2 g/l; alpha-1-globulins – 2.8 g/l; alpha-2-globulins – 5.7 g/l; beta globulins – 6.7 g/l; γ-globulins – 17 g/l; TSH – 0.94 IU/l; alpha-fetoprotein – 3.3 units/l; ferritin – 55 mcg/l; transferrin – 2.4 g/l; potassium – 3.6 mmol/l; Na–137 mmol/l; amylase – 42 units/l; iron – 20.7 µmol/l; CS – 5.2 mmol/l; ceruloplasmin – 188 mg/l. PTI – 57%.

Enzyme immunoassay (blood test for markers of hepatitis B, C): anti-HCV–positive; HBsAg (-); anti-HBs (-); anti-HBcIgG (-); HBeAg(-); anti-HBe (-); anti-HBcIgM (-); anti-HIV – negative. HCV genotyping: genotype 1 – positive. Immunological study: concentration of Ig class G in blood serum -7.3 g/l. Molecular biological studies: PCR: HCV RNA – positive; quantitative analysis of HCV RNA – 31,000 IU/ml.

Liver elastometry: stage F4 (according to the METAVIR scale), liver cirrhosis was determined.

Ultrasound of the abdominal organs revealed hepatomegaly and diffuse dystrophic changes in the liver parenchyma.

A stool occult blood test is negative. General urine
analysis: within normal limits.

X-ray examination of the lungs: no pathological changes. ECG – without
pathological changes.

1.Suggest the most likely diagnosis; 2. Justify the
diagnosis;

3.Draw up and justify a plan for additional examination of the patient;

4.Justify the prescription of drug and non-drug treatment for this patient.

Sample answer:

1.Preliminary diagnosis: Liver cirrhosis associated with HCV infection, Child-Pugh class A (compensated).

2.The diagnosis of “liver cirrhosis associated with HCV infection, Child-Pugh class A” was established based on the patient’s complaints of general weakness, increased fatigue, decreased performance, dull pain in the right hypochondrium; data from anamnesis, objective examination (yellowness of the skin, icterus of the sclera, the presence of telangiectasia, hepatomegaly in the patient).

The diagnosis of liver cirrhosis C is confirmed by research data (detection of anti-HCV; PCR: HCV RNA - positive, HCV RNA level (31,000 IU/ml).

Other etiologies of liver cirrhosis have been excluded: blood tests for hepatitis B markers: HBsAg (-); anti-HBs (-); anti-HBcIgG (-); HBeAg(-); anti-HBe (-); anti-HBcIgM (-)), and also excluded alcohol abuse and taking hepatotoxic drugs.

Class A liver cirrhosis was established based on the Child-Pugh classification. According to the classification criteria (hepatic encephalopathy, ascites not detected, total bilirubin - 36 µmol/l, albumin - 38 g/l, PTI - 57%), 5 points were determined, which corresponds to Child-Pugh class A.

The diagnosis of liver cirrhosis is confirmed by liver elastometry data: F4 (on the METAVIR scale), which corresponds to liver cirrhosis.

Changes in biochemical blood parameters were recorded: increased ALT, AST, total bilirubin, GGTP, gamma globulins, decreased PTI.

Ultrasound of the abdominal organs revealed hepatomegaly, diffuse dystrophic changes in the liver parenchyma.

3. Plan of additional research methods:

- FEGDS – to identify and/or determine the condition of the veins of the esophagus and/or stomach;
- duplex scanning of vessels of the hepatosplenic basin to detect portal hypertension.

4. It is recommended to follow a diet: exclude alcohol, fatty, fried, spicy, smoked, salty, coffee, carbonated drinks, cocoa.

For a patient with liver cirrhosis C, Child-Pugh class A, genotype 1, the following antiviral therapy regimen is recommended:

- dasabuvir 500 mg/day andombitasvir + paritaprevir + ritonavir 12.5 + 75 + 50 mg/day orally with food (the inclusion of ribavirin is necessary for a duration of therapy of 24 weeks; the duration of therapy without the inclusion of ribavirin is 12 weeks).

Or

- daclatasvir 60 mg/day + sofosbuvir 400 mg/day + ribavirin 15 mg/kg/day regardless of food intake for 12 weeks.

To assess the effectiveness of AVT, determination of the level of HCV RNA is used after 4, 12, 24 weeks of therapy, as well as 24 weeks after its completion.

Treatment is carried out in a hospital setting.

Task 52.

Patient P., 42 years old, was hospitalized in a hospital on the referral of a general practitioner with complaints of weakness, drowsiness during the day, jaundice of the skin, a feeling of heaviness in the right hypochondrium, periodic nosebleeds after physical work, increased abdominal volume, swelling in the lower abdomen. limbs in the area of the feet and legs.

Heaviness in the right hypochondrium has been bothering me for the last 3 months. Over the past month, he has noted an increase in general weakness, an enlarged abdomen and jaundice. He has been drinking 200 ml of vodka daily for the last year and is being seen by a narcologist. Denies drug use. There were no blood transfusions or surgical interventions. Objectively: the condition is of moderate severity. Consciousness is clear. Number Linking Test – 40 sec. Height – 178 cm, weight – 62 kg. Skin of normal moisture, icteric. Spider veins are visible in the chest and upper back area. The sclera of the eyes is icteric. Swelling of the feet and lower third of the legs. In the lungs, breathing is vesicular, there are no adverse respiratory sounds. NPV – 18 per minute. On auscultation, heart sounds are rhythmic and there are no murmurs. Heart rate – 78 beats per minute. Blood pressure – 110/70 mm Hg. Art. The tongue is wet, crimson, the papillae are smoothed.

The abdomen is increased in volume, the navel is smoothed, dilated, tortuous veins are visible on the anterior abdominal wall radially from the navel. In a lying position, the stomach is spread out. On palpation, it is soft and painful in the right hypochondrium. The dimensions of the liver according to Kurlov are 15×15×13 cm. The lower edge of the liver is dense and lumpy on palpation. The stool is formed, brown, without pathological impurities. The dimensions of the spleen are 15×12 cm.

Urination is free, painless, urine is dark yellow.

Complete blood count: red blood cells – 4.1×1012/l; Hb – 122 g/l; color index – 0.9%; platelets – 98×109/l, leukocytes – 3.2×109/l, eosinophils – 1%, band neutrophils – 4%, segmented neutrophils – 63%, lymphocytes – 29%, monocytes –3%, ESR – 22 mm/ h.

Biochemical tests: total bilirubin – 130 μmol/l, direct bilirubin – 100 μmol/l, ALT – 120 U/l, AST – 164 U/l. INR – 2, albumin – 28 g/l.

Fibroesogastroduodenoscopy: varicose veins of the esophagus, stage I.

Ultrasound of the abdominal organs: the anteroposterior size of the right lobe of the liver is 170 mm, the contours are clear and uneven. The parenchyma has unevenly diffusely increased echogenicity. The diameter of the portal vein is 16 mm. The gallbladder is of normal size, the contents are bile. The hepaticocholedochus is not dilated. The spleen is located usually, the structure is homogeneous, the parenchyma is of average echogenicity. The area of the spleen is 36.1 cm2. Free fluid in the abdominal cavity.

1. Suggest the most likely diagnosis;
2. Justify the diagnosis;
3. Draw up and justify a plan for additional examination of the patient;
4. What tactics and therapy is required for the patient upon admission.

Sample answer:

1.Preliminary diagnosis: Liver cirrhosis of alcoholic etiology, Child-Pugh class C. Portal hypertension (ascites, splenomegaly, grade I varicose veins of the esophagus). Hypersplenism (thrombocytopenia). Hepatic encephalopathy stage I.

2.The patient was diagnosed with jaundice, cytolysis, “liver signs”: crimson palms, “Spider veins”, portal hypertension syndrome (hepatosplenomegaly, ascites, varicose veins of the esophagus, anterior abdominal wall, dilatation of the portal vein), signs of liver failure (hypoalbuminemia, hypocoagulation). According to ultrasound data, the liver parenchyma has uneven diffusely increased echogenicity. Alcohol history indicates the most likely etiology of liver cirrhosis. Class C is set according to the Childe-Pugh classification - 11 points. A decrease in the speed of the number-binding test indicates stage I hepatic encephalopathy. Thrombocytopenia in this situation is associated with hypersplenism.

3.Additional research plan:

- biochemical blood test: coagulogram, total protein, creatinine, urea, potassium, sodium, GGTP, alkaline phosphatase, amylase, markers of viral hepatitis HBsAg, antibodies to HCV, HIV infection;
-general urine analysis;
- coprogram;
- ECG;
- X-ray of the lungs.

4.Quitting alcohol. A diet with a protein content of 1.0 g/kg/day is predominantly of plant origin. The calorie content of food is 1800–2500 kcal/day, ensured by an adequate supply of fats (70–140 g) and carbohydrates (280–325 g). Limit salt content to 4.6-6.9 g/day. Intestinal sanitation to reduce endotoxemia.

Drug therapy includes the following medications:

- Lactulose - 15-45 ml 2-3 times a day (stools up to 2-3 times a day).
-It is possible to take non-absorbable antibiotics (rifaximin 1200 mg/day for 7-10 days).
-L-ornithine-L-aspartate - intravenous drip administration of 20–30 g of the drug for 7–14 days, followed by switching to oral administration of 9–18 g/day (in case of development of renal failure, the use of the drug should be limited).
-Diuretic therapy: spironolactone - 50–200 mg/day (the dose is increased gradually: step - 100 mg every 7 days). If spironolactone is ineffective or hyperkalemia develops, it is necessary to prescribe furosemide at an initial dose of 40 mg/day with a gradual increase in the dose by 40 mg every 7 days up to 160 mg/day; the criterion for effectiveness is a decrease in body weight of at least 2 kg per week).
-To reduce pressure in the portal vein – propranolol 10-320 mg per day.

Task 53.

Patient B, 58 years old, sought medical help with complaints of general weakness, malaise, nausea, a feeling of heaviness in the right hypochondrium, flatulence, skin itching, aching pain in the right hypochondrium, worsening after eating fatty foods and physical activity, and nosebleeds.

The anamnesis revealed the consumption of alcoholic beverages in large quantities for many years.

Objectively: body temperature 36.9 0C. The general condition is moderate. The skin and visible mucous membranes are yellowish in color; there are brown crusts in the right nasal passage. The tongue is smooth, moist and not coated. On the skin of the chest there are persistent local dilations of small vessels of the skin, consisting of a central part and radial branches of the vessels. The mammary glands are enlarged. Breathing is weakened in the lower-lateral parts of the lungs. BH 23v min. Heart sounds are rhythmic and muffled. Heart rate 92/min. Blood pressure 140/90mm Hg.

The abdomen is enlarged in size,on palpation, moderately painful in the right hypochondrium. The liver protrudes 5 cm from under the edge of the costal arch along the midclavicular line, moderately painful, dense, the surface is uneven. The spleen protrudes from under the edge of the costal arch by 2 cm, painless.

1. Formulate a preliminary diagnosis;
2. What diseases should be used for differential diagnosis? 3.Name additional examination methods.

Sample answer:

1. Diagnosis: Alcoholic cirrhosis of the liver, Child-Pugh class B.
2. Differential diagnosis should be carried out with diseases in which hepato-lienal syndrome is observed (chronic hepatitis, alveococcosis of the liver, Budd-Chiari disease or syndrome, thrombosis of the portal and splenic veins, thrombosis of the inferior vena cava, hemochromatosis, hepatocerebral dystrophy, α-1-antitrypsin deficiency , primary liver amyloidosis, chronic myeloid leukemia, benign subleukemic myelosis, Waldenström's disease).
2. Examination plan: blood test for markers of viral hepatitis, bilirubin, ALT, AST, total protein, protein fractions, ɤ-GTP, alkaline phosphatase, coagulogram, endoscopy, CT, ultrasound of the abdominal organs.

Task 54.

Patient K., 44 years old, came to the clinic with complaints of aching pain in the epigastric region, which occurs 20-30 minutes after eating; for nausea and vomiting of gastric contents, which occurs at the height of pain and brings relief; to decrease appetite.

From the medical history: for the first timesimilar complaints arose about 6 years ago, but the pain was relieved by taking Almagel and No-shpa. He had not previously sought medical help. Notes spring-autumn exacerbations of the disease. Feeling worse for about two days after drinking alcohol and fried foods.

Works as a taxi driver. He eats irregularly and often drinks alcohol. He has smoked up to 2 packs of cigarettes a day for 20 years. Family history: father has a stomach ulcer.

Objectively: general condition is relatively satisfactory. Asthenic, low nutrition. The skin and visible mucous membranes are pale pink. Peripheral lymph nodes are not enlarged. Breathing is vesicular, no wheezing. NPV – 16 per minute. Pulse of satisfactory filling and tension, 74 beats per minute. Blood pressure - 120/80 mm Hg. Art. Heart sounds are clear and rhythmic. Heart rate – 74 beats per minute. The tongue is covered with a white coating. The abdomen is soft on palpation, painful in the epigastric region, Mendel's sign is positive, Shchetkin-Blumberg's sign is negative. The spleen is not enlarged.

The effleurage symptom is negative on both sides. Stool daily, without pathological impurities.

Data from additional research methods.

Complete blood count: hemoglobin – 130 g/l, erythrocytes – 4.2×1012/l. - 1, leukocytes – 6.5×109/l, eosinophils – 1%, band neutrophils – 1%, segmented neutrophils – 60%, lymphocytes – 30%, monocytes – 8%, ESR – 10 mm/h.

General urine analysis: relative density - 1018, epithelium - 2-4 in the field of view, protein, casts, salts - not detected.

Biochemical blood test: glucose – 4.5 mmol/l, fibrinogen – 2.9 g/l, total protein – 68 g/l.

FGDS: the esophagus is freely passable, the mucous membrane is not changed, the cardiac sphincter closes. The stomach is of normal shape and size. The mucous membrane is hyperemic, the folds are of normal shape and size, in the cardiac section, along the greater curvature, an ulcerative defect of 1.0-1.5 cm is determined, with smooth edges, shallow, the bottom is covered with fibrin. The duodenal bulb is of normal shape and size, the mucous membrane is pale pink. Helicobacter pylori was detected.

1. Identify the main syndromes;

2.Formulate a diagnosis; 3. Justify the diagnosis;

4.What diseases should this pathology be differentiated from? 5.List the basic principles of treatment.

Sample answer:

1. Abdominal pain syndrome, gastric dyspepsia syndrome.
2. Gastric ulcer, acute stage, newly diagnosed, HP-associated.
3. The diagnosis was made on the basis of complaints (early epigastric pain after eating); anamnesis data: presence of risk factors (alcohol consumption, irregular diet, smoking, family history), seasonal exacerbations (spring and autumn); FGDS data; HP detection.
4. Chronic gastroduodenitis, symptomatic ulcers, chronic pancreatitis, chronic cholecystitis, malignant neoplasms of the stomach.
5. Compliance with nutrition and diet, HP eradication (standard triple therapy for 14 days), a course of basic antisecretory therapy for 6-8 weeks.

Task 55.

Patient V., 37 years old, complains of burning pain in the epigastric region, occurring on an empty stomach and at night, heartburn, nausea, and sometimes, at the height of the pain, vomiting, which brings relief.

These symptoms have been bothering me for 10 years and occur mainly in spring and autumn. He takes soda and Almagel on his own, which cause a positive effect. This exacerbation is associated with taking Voltaren for pain in the lumbar region.

Objectively: the condition is satisfactory, the skin is of normal color, moist. Pulse – 60 beats per minute, blood pressure – 100/70 mm Hg. Art. The tongue is moist, thickly coated with white coating. The abdomen is of normal shape, not swollen, and upon palpation it is sharply painful in the epigastric region. Stool with a tendency to constipation (1 time every 2 days).

Complete blood count: hemoglobin – 130 g/l, ESR – 10 mm/h, leukocytes – 5.2×109/l; leukoformula: band neutrophils - 2%, segmented neutrophils - 66%, lymphocytes - 27%, monocytes - 5%.

Biochemical blood test: ALT – 40 units/l, AST – 32 units/l. Urine diastasis – 64 units.

EGDS: the esophagus is freely passable, the cardia is closed. The stomach on an empty stomach contains a large amount of light secretory fluid and mucus. Folds

mucous membranethe stomachs are thickened, tortuous, diffusely hyperemic. The duodenal bulb is deformed; a mucosal defect of up to 0.7 cm in diameter is detected on the posterior wall. The edges of the defect have clear boundaries, are hyperemic, and swollen. The bottom of the defect is covered with white fibrinous deposits. Postbulbar sections without pathology.

Helic test: basal level – 4 mm; load level – 10 mm; growth rate – 6 mm; HP (+).

1. Formulate a diagnosis;
2. List the exogenous and endogenous predisposing factors leading to the development of this disease;
3. Indications for hospitalization; 4.

Complications of this disease; 5.

Prescribe treatment.

Sample answer:

1. Peptic ulcer with localization of a medium-sized ulcer (0.7 cm) on the posterior wall of the duodenal bulb, acute phase. Scar-ulcerative deformity
2. Exogenous factors: neuropsychic effects, psycho-emotional stress; injuries, brain diseases; nutritional factor; taking medications (NSAIDs, GCs, etc.); household and industrial hazards; weather conditions; Helicobacter pylori infection. Endogenous factors: hereditary predisposition; first blood group; constitutional status; gender and age; diseases of internal organs; dysbiosis of the gastroduodenal zone.
3. Indications for hospitalization: patients with a complicated and often recurrent course of the disease; patients with stomach ulcers, if it is not possible to conduct a qualified examination of gastrobiopsy; patients with an ulcer that occurs with severe pain or pain that is not relieved within a week of outpatient treatment; patients with gastroduodenal ulcers that developed in weakened patients or against the background of severe concomitant diseases; if it is impossible to organize treatment of the patient and monitor the healing of the ulcer in an outpatient setting.
4. Complications:

- bleeding: light, moderate, severe, extremely severe;
- perforation;
- penetration;
- stenosis: compensated; subcompensated; decompensated;
- malignancy.

5. Treatment: three-component regimen: Omez 20 mg 2 times a day + Clarithromycin 500 mg 2 times a day + Amoxicillin 1000 mg 2 times a day (or Metronidazole 500 mg 3 times a day) (10 days).

If ineffective, use a four-component regimen: Omez 20 mg 2 times a day + Tetracycline 500 mg 4 times a day + Metronidazole 500 mg 3 times a day + De-nol 240 mg 2 times a day (10 days).

Task 56.

A 64-year-old man consulted a local general practitioner with complaints of pain in the epigastrium 20 minutes after eating, vomiting, which brought relief, and lost 7 kg in a month. Epigastric pain has been bothering me for about 2 months.

On examination: condition is satisfactory. The skin is of normal color and clean. In the lungs there is vesicular breathing, no wheezing. Heart sounds are clear, rhythmic, heart rate – 72 beats per minute, blood pressure - 120/80 mm Hg. Art. On palpation, the abdomen is soft, painful in the epigastrium. Liver along the edge of the costal arch. Dimensions - 10x9x8 cm. The spleen is not palpable.

A fibrogastroduodenoscopy was performed: in the middle third of the stomach there was an ulcerative defect 3 cm in diameter, a biopsy was taken.

1.Formulate a preliminary diagnosis; 2. Justify your
diagnosis; 3.Make a differential diagnosis plan;

4.Draw up a plan for additional examination;

5.What drug treatment would you recommend to the patient? Justify your choice.

Sample answer:

1. Peptic ulcer disease detected for the first time, exacerbation: ulcer of the body of the stomach 3 cm in diameter. 2. The diagnosis was established based on the patient's complaints, examination data and FGDS.

3.Peptic ulcer, stomach cancer.

4.FGDS with a biopsy of 6-8 fragments (exclude stomach cancer, H. pylori). X-ray of the gastrointestinal tract with barium (to exclude complications of peptic ulcer).

5.Proton pump inhibitors - a basic group of drugs for the treatment of acid-dependent diseases (Omeprazole, Lansoprazole, Esomeprazole, Pantoprazole, Rabeprazole), antacids (Maalox, Almagel, Phosphalugel, etc.) - symptomatic therapy, prokinetics (Etapride) affects the tone of the lower esophageal sphincter , improve antroduodenal coordination. If H.Pylori is detected, eradication therapy (Amoxicillin + Clarithromycin). If stomach cancer is confirmed, consult an oncologist.

Task 57.

A 48-year-old man, a programmer by profession, consulted a local general practitioner with complaints of pain in the epigastric region, mainly on an empty stomach and at night, causing him to wake up, as well as almost constant heartburn, a feeling of heaviness and fullness in the epigastric region after eating , heartburn, sour belching, nausea.

From the anamnesis it is known that the patient smokes a lot, abuses coffee, and eats irregularly. Exacerbations of chronic pharyngitis often occur. Ill for about three years. He was not examined, he was treated independently (he took herbal medicine).

On examination: condition is satisfactory. BMI - 32.0 kg/m2. The skin is clean and of normal color. Body temperature is normal. The pharynx - tonsils, the back wall of the pharynx are not hyperemic. In the lungs there is vesicular breathing, no wheezing. Heart sounds are muffled, rhythmic, heart rate - 70 beats per minute, blood pressure - 120/80 mm Hg. Art. The abdomen participates in the act of breathing, is soft on palpation, painful in the epigastric region, there is no tension in the abdominal muscles, the symptom of tapping in the lumbar region is negative.

EGD: the esophagus is freely passable, the longitudinal folds are thickened, focal hyperemia of the mucous membrane of the distal esophagus, the cardia does not close completely. The stomach on an empty stomach contains a small amount of light secretory fluid and mucus. The folds of the gastric mucosa are thickened and tortuous. The duodenal bulb is deformed; a mucosal defect up to 0.5 cm in diameter is detected on the posterior wall. The edges of the defect have clear boundaries, are hyperemic, and swollen. The bottom of the defect is covered with white fibrinous deposits. Postbulbar sections without pathology. Urease test for the presence of H. pylori is positive.

1.Suggest the most likely diagnosis; 2. Justify
your diagnosis;

3.Draw up and justify a plan for additional examination of the patient;

4.What treatment would you recommend to the patient as part of combination therapy? Justify your choice.

5.Is it necessary to register a patient at a dispensary? What should be prescribed to the patient as preventive therapy “on demand” when symptoms characteristic of an exacerbation of peptic ulcer disease appear?

Sample answer:

1.Duodenal ulcer associated with Helicobacter pylori, single small (0.5 cm) ulcer of the posterior wall of the duodenal bulb, newly diagnosed, cicatricial ulcerative deformity of the duodenal bulb. Gastroesophageal reflux disease (GERD), stage I. Chronic pharyngitis stage of remission. Obesity 1 tbsp.

2.The patient has hunger pain, night pain, and heartburn, which are characteristic of duodenal ulcer. The diagnosis is confirmed by EGD data: the duodenal bulb is deformed, a mucosal defect up to 0.5 cm in diameter is detected on the posterior wall. The edges of the defect have clear boundaries, are hyperemic, and swollen. The bottom of the defect is covered with white fibrinous deposits. The association of peptic ulcer with Helicobacter pylori was determined by a positive urease test. Gastroesophageal reflux disease (GERD), stage I was diagnosed based on complaints of heartburn, sour belching; the presence of risk factors: chronic pharyngitis in the patient (history data), examination revealed obesity of the first degree; EGD data - the esophagus is freely passable, the longitudinal folds are thickened, focal hyperemia of the mucous membrane of the distal esophagus (changes correspond to stage I of GERD). Obesity 1 tbsp. set on the basis of body mass index - 32.0 kg/m2, which corresponds to 1 tbsp. obesity.

3.In order to exclude complications, the patient is recommended the following examination: complete hematological blood test, transaminases (ALT, AST), blood sugar, blood creatinine. Carrying out an ECG for differential diagnosis with ischemic heart disease; Ultrasound of the abdominal cavity to exclude concomitant pathologies; to clarify the degree of inflammation and identify metaplasia - cytological and histological examination of a biopsy of the edges of the ulcer and mucosa at the site of damage to the esophagus, daily intraesophageal pH-metry to clarify the nature of the reflux. Consultation with a surgeon - according to indications (if there is a complication of peptic ulcer disease), an oncologist - if a malignant nature of the ulceration is suspected. Consultation with an otorhinolaryngologist to clarify the stage of chronic pharyngitis.

4.Three-component Helicobacter pylori eradication regimen: PPI in a standard dose (Omeprazole - 20 mg, Lansoprazole - 30 mg, Rabeprazole - 20 mg or Esomeprozole - 20 mg); Clarithromycin - 500 mg; Amoxicillin - 1000 mg or Metronidazole (MTP) - 500 mg. Prescribe all medications 2 times a day, for at least 10-14 days. If this therapy is ineffective, quadruple therapy is prescribed. Given the presence of GERD, it is necessary to prescribe prokinetics that stimulate gastric emptying: Itopride hydrochloride. Itopride hydrochloride enhances propulsive motility of the gastrointestinal tract due to antagonism with dopamine D2 receptors and dose-dependent inhibition of acetylcholinesterase activity. Activates the release of acetylcholine and inhibits its destruction. It has a specific effect on the upper gastrointestinal tract, accelerates gastric transit and improves emptying. Prescribed 50 mg 3 times before meals. After 14 days, continue taking PPI at a standard dose for another 2-5 weeks for effective healing of the ulcer under the control of FGDS.

5.All patients with peptic ulcer and GERD should be registered at the dispensary. Non-drug therapy is recommended taking into account the combination of peptic ulcer with GERD:

1)avoid eating large meals;

2)after eating, avoid bending forward and horizontal position; last meal no later than 3 hours before bedtime;

3)limit the intake of foods that reduce the pressure of the lower esophageal sphincter and have an irritating effect on the mucous membrane of the esophagus: rich

fats (whole milk, cream, cakes, pastries), fatty fish and meat, alcohol, coffee, strong tea, chocolate, citrus fruits, tomatoes, onions, garlic, fried foods; give up carbonated drinks;

4) sleep with the head of the bed raised;

5) eliminate loads that increase intra-abdominal pressure - do not wear tight clothes and tight belts, corsets, do not lift weights of more than 8-10 kg on both hands, avoid physical activity associated with abdominal strain; 6) quit smoking; normalize and maintain normal body weight. Preventive therapy

"on demand" is prescribed when symptoms characteristic of an exacerbation of peptic ulcer disease appear. Omeprazole is prescribed in a full daily dose (40 mg) for 2-3 days, and then in a half dose (20 mg) for two weeks.

Task 58.

Patient S., 55 years old, consulted a local general practitioner with complaints of nausea, acute night and hunger pain in the epigastrium, decreasing after eating, nausea, vomiting "coffee grounds," and occasional black "tarry" stools. She is being treated for rheumatoid arthritis; she has been taking Indomethacin for a long time (more than 3 months), 1 tablet 3 times a day. I have not noted these complaints before and have not consulted a doctor.

Objectively: the condition is of moderate severity. The skin is pale. Reduced nutrition. The tongue is covered with a white coating and is moist. In the lungs, breathing is vesicular, respiratory rate is 16 per minute. Heart sounds are clear, rhythmic, heart rate - 88 beats per minute, blood pressure - 110/70 mm Hg. Art. The abdomen is tense, sharply painful locally in the Shofar area. Symptoms of peritoneal irritation are negative. Black "tarry" stool. Urination is not impaired.

Clinical blood test: hemoglobin – 100 g/l; erythrocytes – 3.0×1012/l; leukocytes 8.4×109/l; stab - 4%; segmented – 61%; eosinophils – 1%; lymphocytes – 30%; monocytes – 4%; ESR – 20 mm/hour.

1. Suggest the most likely diagnosis; 2. Justify your diagnosis;

3. Draw up and justify a plan for additional examination of the patient;

4. What group of antiulcer drugs would you recommend to the patient in initial therapy? Justify your choice;

5. After 2 weeks of therapy,signs of scarring of the ulcer. What are your further treatment tactics? Justify your choice.

Sample answer:

1. Gastric ulcer complicated by bleeding while taking NSAIDs. 2. Diagnosis of "peptic ulcer of the stomach, complicated by bleeding while taking NSAIDs" was established on the basis of the patient's complaints of nausea, acute night and hunger pain in the epigastrium, decreasing after eating, nausea, vomiting "coffee grounds", once black "tarry" stools, medical history of taking Indomethacin for a long time (more than 3 months); examination data (the abdomen is tense, sharply painful locally in the Shofar area, black "tarry" stool); based on a blood test (hemoglobin 100 g/l).

3. The patient is recommended: an endoscopy to identify the site of bleeding, consultation with a surgeon to determine further treatment tactics.

4. Proton pump inhibitors are the drugs of choice for ulcers caused by NSAIDs (Esomeprazole 40 mg once a day, since this drug has better pharmacokinetics and pharmacodynamics and is not influenced by genetic polymorphism).

5. Continue antiulcer therapy without changes, determine the presence of H. pilory; if the answer is positive, prescribe an anti-Helicobacter treatment regimen.

Task 59.

A 57-year-old patient complained of weakness, weight loss of 10 kg over 2 months, discomfort when swallowing food in the epigastric region, difficulty passing solid food through the esophagus. The patient has a history of chronic gastritis for 8 years. Smokes, abuses alcohol.

1) What disease can you think of in this case?

2) Justify your diagnosis;

3) Draw up and justify a plan for additional examination of the patient;

4) FGDS with biopsy yielded a morphological conclusion - adenocarcinoma; ultrasound in the abdominal cavity in the projection of the stomach revealed a tumor-like formation 6x4 cm, perigastric lymph nodes enlarged to 1.5 cm, and a small amount of free fluid. What can you think about?

5) What are your further treatment tactics? Justify your choice.

Sample answer:

1) Stomach cancer. Taking into account dysphagia, the pathological process apparently extends to the cardia of the stomach and, possibly, to the esophagus. Cancer of the lower third of the esophagus is less likely.

2) This disease could develop in a patient against the background of chronic gastritis, which is an optional precancerous disease. Additional risk factors are alcohol abuse and smoking. The presence of weakness and weight loss also indicates the malignant nature of the pathological process.

3) To clarify the localization of the process, it is necessary to perform fluoroscopy and radiography of the esophagus and stomach, fibrogastroduodenoscopy with biopsy. To determine possible metastasis, it is necessary to perform an ultrasound of the abdominal cavity and x-ray of the lungs.

4) The patient has stomach cancer T3N1M0-1, stage 3, in the case of metastatic damage to the peritoneum - stage 4. Presumably there is metastatic damage to the regional lymph nodes. The presence of ascites may indicate peritoneal dissemination of the tumor.

5) Surgical intervention involving gastrectomy is indicated. Due to the presence of ascites, it is advisable to begin the operation with video laparoscopy. In the presence of severe peritoneal dissemination, the scope of the operation should be limited to diagnostic ones. In the absence of the latter, the operation will be radical. If there is dissemination and it is technically possible to perform gastrectomy, the operation will be cytoreductive in nature. After surgery, adjuvant or palliative chemotherapy is indicated.

Task 60.

A 28-year-old man appliedwith complaints of an increase in body temperature to 39.5°C, chills, nosebleeds, bleeding gums, the appearance of “bruises” on the skin for no apparent reason, severe general weakness, sweating.

Considers himself sick for 7 days when fever appears. I took paracetamol with short-term effect. Weakness gradually increased, followed by nosebleeds and bleeding gums.

From the life history: he denies the presence of chronic diseases, his anamnesis is not burdened with hereditary diseases. Has a special secondary education and works as a technologist. Served in the army on a submarine.

Objectively: the condition is of moderate severity. Body temperature 38 C. The skin is pale, with normal moisture. On the skin of the lower extremities - ecchymosis; petechiae on the skin of the shoulders, forearms; in the oral cavity – severe contact bleeding of the gums. On auscultation, breathing is vesicular, respiratory rate is 19 per minute. Heart sounds

muffled, the rhythm is correct. Heart rate – 92 beats per minute. Blood pressure – 100/65 mm Hg. Art. The abdomen is soft and painless on palpation. The edge of the liver is palpated 1 cm below the edge of the costal arch, dimensions according to Kurlov are 16 × 10 × 9 cm. The spleen is palpable, elastic, painless, percussion dimensions 10 × 8 cm.

Complete blood count: red blood cells– 1.7×1012, Hb - 75 g/l, platelets - 27×109, leukocytes – 33×109, blasts - 35%, myelocytes - 0%, young neutrophils - 0%, band neutrophils - 7%, segmented neutrophils - 38, lymphocytes - 20%, ESR - 30 mm/h.

1.Formulate a preliminary diagnosis; 2. Justify
your diagnosis;
3.What examinations need to be prescribed to clarify the diagnosis? 4.
Select and justify the patient management tactics;
5.What complications are possible with this disease.

Sample answer:

1.Acute leukemia, debut. Moderate anemia.

2.The diagnosis of "acute leukemia" was made on the basis of identified clinical and hematological syndromes: hemorrhagic (nose and gingival bleeding,
"bruises" all over the body, a decrease in the level of peripheral blood platelets), anemic (pallor of the skin, a decrease in the level of red blood cells and hemoglobin in peripheral blood), intoxication (weakness, sweating, fever, chills). The main diagnostic criteria are the CBC data: leukocytosis, the presence of blast cells, leukemic "failure".

3.The main studies to clarify the diagnosis are:

Trephine biopsy with bone marrow examination (20% or more blast cells in the myelogram); cytochemical study and immunophenotyping of blasts (determination of leukemia variant), cytogenetic study of bone marrow (determination of prognostically favorable and/or unfavorable cytogenetic defects); diagnostic lumbar puncture (to exclude neuroleukemia); Ultrasound of the abdominal cavity, retroperitoneal space, kidneys, SCT of the chest organs (to clarify the degree of leukemic infiltration).

4.To verify the diagnosis and treatment, hospitalization in the hematology department is indicated. Treatment includes cytostatic therapy: polychemotherapy is used according to standard programs, depending on the type of leukemia. With a poor prognostic index in the remission phase of the disease, allogeneic bone marrow transplantation is indicated.

5.Complications of acute leukemia include bleeding of various locations; ulcerative necrotic lesions of the mucous membranes of the gastrointestinal tract; infectious lesions; damage to the nervous system (specific infiltration of the central nervous system, hemorrhages).

Task 61.

At an appointment with a general practitioner at the clinic, a 63-year-old woman complains of painless tumor-like elastic formations on the side of the neck and in the axillary areas, as well as heaviness in the left hypochondrium, weakness, and increased sweating, which began to appear about a year ago and gradually increased.

Objectively: general condition is satisfactory. The skin and visible mucous membranes are of normal color. Conglomerates of symmetrically enlarged submandibular, cervical, axillary, inguinal lymph nodes are palpated; on palpation they are elastic, painless, the skin over them is unchanged up to 2-3 cm in diameter. In the lungs, breathing is vesicular, no wheezing is heard, respiratory rate is 18 per minute. Heart sounds are clear, heart rate is 78 beats per minute. Blood pressure - 120/80 mm Hg. Art. The abdomen is soft and painless. The edge of the liver does not protrude from under the edge of the costal arch. The spleen protrudes 2 cm from under the edge of the costal arch, the edge is elastic and painless.

Complete blood count: erythrocytes – 3.2×1012, HB – 129 g/l, platelets – 180×109/l, leukocytes – 35×109/l, band neutrophils – 2%, segmented neutrophils – 2%, lymphocytes – 92 %, monocytes – 4%, ESR – 30 mm/h, Botkin-Gumprecht shadows – 1-2 in the field of view.

1.What preliminary diagnosis can be made? 2. Justify
your diagnosis;

3.What examinations need to be prescribed to clarify the diagnosis? 4.
Select and justify the tactics of patient management;

5.What is the prognosis for this disease, and what are the possible complications?

Sample answer:

1.Chronic lymphocytic leukemia, stage II according to R2i.

2.Diagnosis of chronicleukemia" was diagnosed on the basis of clinical data (old age, complaints of increased fatigue, sweating, enlarged lymph nodes); objective data (symmetrical enlargement of the lymph nodes, upon palpation they are painless, doughy or elastic consistency, mobile, the skin over them is not changed, the presence of splenomegaly is characteristic, in a general blood test - leukocytosis with absolute lymphocytosis, Botkin-Gumprecht shadows). Stage II of chronic lymphocytic leukemia is diagnosed when the spleen is enlarged.

3.Biochemical blood tests. Sternal puncture (in the bone marrow puncture there is an increase in the number of lymphocytes of more than 30%), ultrasound of the abdominal organs (presence of splenomegaly, determine whether or not there is an increase in intra-abdominal and retroperitoneal lymph nodes). Chest X-ray (to determine if there is enlargement of the intrathoracic lymph nodes). Trephine biopsy, lymph node biopsy, bone marrow immunophenotyping (differential diagnosis with non-Hodgkin's lymphoma).

4.To verify the diagnosis and treatment, hospitalization in the hematology department is indicated. In stage II of the disease, the use of cytostatics is indicated: Fludarabine, Cyclophosphamide, 6 courses with an interval of 4 weeks. Monoclonal antibodies: Rituximab.

5.The prognosis depends on the stage of the disease and the rate of development of the disease. Recovery is impossible, but the immediate prognosis for stage II is relatively favorable. The long-term prognosis is unfavorable. The development of autoimmune complications (autoimmune hemolytic anemia syndrome, autoimmune thrombocytopenia syndrome), infectious complications, which are the main cause of death in patients with chronic lymphocytic leukemia, is possible.

Task 62.

Patient M., 52 years old, came to the clinic with complaints of weakness, sweating, fatigue, heaviness in the left hypochondrium, decreased appetite, and a feeling of rapid satiety. These complaints appeared about 7 months ago and gradually increased. Objectively: the edge of the spleen is palpable 6 cm below the costal arch, elastic, painless. In the lungs, breathing is vesicular, no wheezing is heard, respiratory rate is 16 per minute. Heart sounds are clear, heart rate is 75 beats per minute. Blood pressure - 130/80 mm Hg. Art. The abdomen is soft and painless. The edge of the liver does not protrude from under the edge of the costal arch. Blood test: hemoglobin - 97 g/l, color index - 0.91, leukocytes - 57.3×109/l (promyelocytes - 1%, neutrophilic myelocytes - 3%, neutrophilic metamyelocytes - 7%, neutrophilic band cells - 14%, neutrophil segmented - 58%, lymphocytes - 6%, eosinophils - 4%, basophils - 6%, monocytes - 1%), platelets - 440×109/l. Activity neutrophil alkaline phosphatase is reduced.

1.Assume and justify the most likely diagnosis;

2.Make a plan for additional examination of the patient to confirm the diagnosis;

3.Which laboratory parameters of the patient do not correspond to the chronic stage of the disease, justify your answer;

4. Cytogenetic analysis revealed the presence of a Ph chromosome; according to clinical signs, the patient was stratified into the intermediate risk category. Specify treatment tactics;

5. Name the signs of complete hematological remission in the treatment of this disease. Justify your answer.

Sample answer:

1. The most likely diagnosis is "chronic myeloid leukemia", chronic stage. Mild hypochromic metaplastic anemia. The diagnosis was established on the basis of identified clinical syndromes, namely: hyperplastic (splenomegaly), intoxication (weakness, fatigue, sweating), taking into account the patient's age (over 50 years), and also based on the CBC data, which revealed pronounced absolute neutrophilic leukocytosis, the presence of immature forms leukocytes up to myelocytes, the presence of transitional forms of neutrophils (in contrast to acute myeloid leukemia, in which a "leukemic failure" is observed), an increase in the percentage of basophils and eosinophils (basophilic-eosinophilic association, characteristic specifically for chronic myeloid leukemia), anemia, decreased alkaline phosphatase activity neutrophils.

2. To confirm the diagnosis it is necessary: morphological examination of the bone marrow (trephine biopsy); cytogenetic analysis, identification of the Philadelphia chromosome, cytogenetic study of bone marrow with measurement of the concentration of BCR-ABL transcript. BCR-ABL is a chimeric gene, a consequence of the presence of the Philadelphia chromosome (translocation 9;22, which is found in almost all cases of CML).

3. Thrombocytopenia less than 100×109/l, not associated with treatment, does not correspond to the chronic stage of the disease, since the platelet count is increased in the chronic stage. The acceleration stage includes: detection of 20% or more basophils in the blood; less than 100×109/l platelets in the blood, not due to treatment; as well as an increase in the size of the spleen and the number of leukocytes with appropriate therapy. To establish the acceleration stage, one of the signs listed above is sufficient.

4. Currently, the first-line drug for the treatment of the chronic stage of CML is Imatinib (Gleevec), a tyrosine kinase inhibitor, a drug with pathogenetic action. Imatinib blocks the tyrosine kinase of three types of receptors (Bcr-Abl, c-kit and PDGFR) of an abnormal enzyme produced by the Philadelphia chromosome. In addition, Imatinib suppresses the proliferation of Bcr-Abl-positive tumor cells, induces their apoptosis, and also blocks platelet-derived growth factor and stem cell growth factor tyrosine kinase receptors. Possible treatment methods in this situation should also include the administration of Interferon-α, autologous bone marrow transplantation of the patient, leukapheresis, and splenectomy.

5. Signs of complete hematological remission: absence of clinical manifestations of the disease; leukocyte concentration less than 10×109/l; absence of immature forms of granulocytes, starting with myelocytes.

Task 63.

A 35-year-old man complained of severe weakness, shortness of breath, night sweats, periodic increases in body temperature up to 38C, bruises all over the body for no apparent reason, frequent nosebleeds, bleeding gums, and a feeling of heaviness in the right hypochondrium. Considers himself sick for about a month. Significant deterioration in health in the form of increasing weakness, additional fever, and increased nosebleeds over the last week. He undergoes medical examinations annually, the last one was 4 months ago, no pathology was detected.

Objectively:body temperature - 38.1°C. The skin and visible mucous membranes are pale, multiple petichiae and ecchymoses of various localizations at different stages of "flowering".

Peripheral lymph nodes are not enlarged. There is a clear pulmonary sound above the lungs, vesicular breathing on auscultation. Blood pressure - 110/70 mm Hg. Art. The limits of relative cardiac dullness are within normal limits. Heart sounds are rhythmic, clear, 98 per minute. The abdomen is soft and painless, the liver and spleen are not enlarged. The effleurage symptom is negative on both sides, the kidneys are not palpable.

Laboratory.

General blood test: hemoglobin - 76 g/l, red blood cells - 2.1×1012/l, color index – 0.75, platelets - 21×109/l, leukocytes - 39×109/l, blasts - 25%, eosinophils - 0%, band neutrophils - 0%, segmented neutrophils - 71%, lymphocytes -4%, monocytes - 0 %; ESR - 55 mm/h.

General urine analysis without pathological changes.

Biochemical blood test: total bilirubin - 18 μmol/l, creatinine - 0.196 mmol/l, glucose - 4.3 mmol/l, total cholesterol - 5.9 mmol/l, potassium - 3.9 mmol/l, total protein - 76 g/l,

Coagulogram: APTT - 50 s (normal - 32-42 s), PTI - 105%, fibrinogen - 6 g/l. 1.What preliminary diagnosis can be made to the patient?

2.Justify your diagnosis;

3.Draw up and justify a plan for additional examination of the patient;

4.Make a treatment plan for this patient. Justify your choice; 5. Determine the patient's prognosis and ability to work.

Sample answer:

1.Acute leukemia (unspecified variant). Hypochromic anemia, moderate severity. Metaplastic nephropathy. Chronic renal failure II B according to Ryabov.

2.The patient has hemorrhagic (petechiae and ecchymoses, nosebleeds, bleeding gums, very low platelet count, increased aPTT), anemic (pallor of the skin, low erythrocyte and hemoglobin content), intoxication (weakness, sweating, shortness of breath, fever) syndromes. All syndromes are based on tumor progression with replacement of a pool of tumor cells by normal HSCs with the subsequent development of anemia and thromocytopenia, a decrease in coagulation factors, and the development of tumor intoxication. Tumor progression is confirmed by pronounced leukocytosis and blastocytosis of peripheral blood.

3.To verify the diagnosis, the patient is recommended to:

trephine biopsy (myelogram) with bone marrow examination;

cytochemical reaction on blast cells; carrying out immunophenotyping – to establish the variant of acute leukemia.

For further dynamics during chemotherapy: bilirubin level and fractions; GFR calculation. Ultrasound of the abdominal cavity and retroperitoneal space, kidneys, SCT of the chest, ECG.

4.Hospitalization to the hematology department.

Specific chemotherapy depending on the established type of acute leukemia (acute myeloid leukemia or acute lymphocytic leukemia).

Correction of anemia - red blood cells or washed red blood cells.

5.The prognosis is relatively unfavorable. With adequate therapy, remission and recovery are possible.

For the period of treatment - complete loss of ability to work, refer to the ITU to determine the disability group, since therapy on average takes about 1.5 years.

Problem 64.

Patient A., 18 years old, was admitted to the therapeutic department on the 12th day of illness in a serious condition. She became acutely ill. The temperature rose to 39°C, and a sore throat appeared when swallowing. Then I noticed an enlargement of the cervical lymph nodes. She was treated as an outpatient, but her condition did not improve and her weakness increased.

Objectively: the patient's general condition is serious, she speaks with difficulty, the skin and mucous membranes are pale, there is a hemorrhagic rash on the skin, multiple petechiae and ecchymoses. Body temperature up to 40°C. The cervical, posterior cervical and submandibular lymph nodes are enlarged up to 1 cm in size and painful. The gums are loosened. The pharynx is hyperemic, the tonsils are enlarged, swollen, covered with purulent plaque, and there are necrotic ulcers. In the lungs there is a pulmonary sound on percussion, vesicular breathing on auscultation. The boundaries of the heart are not changed. Pulse - 120 per minute, rhythmic. The tongue is red. The abdomen is soft and painless. The spleen and liver are not palpable.

Blood test: red blood cells - 1.5×1012/l, hemoglobin - 67 g/l, reticulocytes - 0.1%, color index - 1.0; platelets - 5.0×109/l; leukocytes - 0.8×109/l; eosinophils - 0%, band neutrophils - 1%, segmented neutrophils - 7%, s. - 90%, monocytes - 2%, ESR - 72 mm/hour. Sternal punctate: total number of myelokaryocytes - 6.8×109/l. There are no granulocytes. Blast cell groups account for 70%.

1.Your presumptive diagnosis; 2. Justify
the preliminary diagnosis;
3.What complications of the underlying disease do you expect?
4.Make a plan for additional examination methods; 5. Treatment
tactics, choice of drugs.

Sample answer:

1. Acute lymphoblastic leukemia, aleukemic form. Necrotizing tonsillitis.2. The diagnosis is based on the selected clinical
syndromes:
intoxication-inflammatory (fever, serious condition of the patient), hyperplastic (symmetrical enlargement of several groups of lymph nodes), syndrome of secondary immune disorders (severe necrotizing pharyngitis), hemorrhagic (hemorrhagic spots on the skin, loosened gums), based on the data of the CBC, which revealed pancytopenia and a significant decrease in the total number of leukocytes, a sharp increase in the percentage of immature forms of lymphocytes, and also taking into account the presence of 70% of blast cells in the bone marrow punctate,

To clarify the diagnosis, a myelogram analysis with immunohistochemical methods, immunophenotyping, and cytogenetic research is indicated.

3.Complicationsunderlying disease: necrotizing pharyngitis, hemorrhagic diathesis, pancytopenia, agranulocytosis, possible development of neuroleukemia.

4.Myelogram with morphological and cytochemical examination.
Immunophenotyping of blast cells.
Puncture examination of enlarged lymph nodes. Cytogenetic study with assessment
of the cytogenetic risk group. MRI of the brain, assessment of the appearance of
neuroleukemia.
Cerebrospinal fluid analysis.
CT scan of the chest to assess mediastinal lymph node involvement. 5. Polychemotherapy aimed at induction and consolidation of remission (protocol
T-prolong, CHOP), allogeneic myelotransplantation, prevention of neuroleukemia, treatment of necrotizing tonsillitis with broad-spectrum parenteral antibacterial drugs. The prognosis is relatively unfavorable. With adequate therapy
– it is possible to achieve remission and recovery. For the period of treatment - complete loss of ability to work, refer to the ITU to determine the disability group, since therapy on average takes about 1.5 years.

Task 65.

Patient D., 58 years old, was admitted to the cardiology department with complaints of shortness of breath that occurs during normal physical activity and resolves with rest, weakness, and increased fatigue. From the anamnesis it is known that at the age of 51 he suffered a myocardial infarction. Over the past year, the patient noted the appearance of shortness of breath,

first when

intense, then with normal physical activity. The patient's father died at the age of 52 from heart disease.

On examination: the condition is moderate. Height 170 cm, weight 75 kg. The skin is of normal color. Acrocyanosis of the lips. The chest is conical, symmetrical. Respiration rate - 20 per minute. With comparative percussion in symmetrical areas of the chest, a clear pulmonary sound is determined. On auscultation, vesicular breathing is heard over the lungs. The boundaries of relative dullness of the heart: right - the right edge of the sternum, left - in the 5th intercostal space 1.5 cm outward from the left midclavicular line, upper - the upper edge of the 3rd rib. On auscultation of the heart, the sounds are weakened and there are no murmurs. The heart rhythm is correct. Heart rate - 94 per minute Blood pressure 125/80 mm Hg. The abdomen is soft and painless. Liver dimensions according to Kurlov: 9x8x7 cm.

General blood test: hemoglobin - 150 g/l, leukocytes - 6.8x109/l, erythrocytes - 4.6x1012/l, eosinophils -1%, band cells - 2%, segmented cells - 67%, lymphocytes - 22%, monocytes - 8 %,

ESR - 6 mm/h.

General urine analysis: relative density 1019, acidic reaction; protein, glucose are absent; 0 red blood cells in the field of view, 1-2 leukocytes in the field of view.

A biochemical blood test showed a cholesterol level of 6.6 mmol/l.

EchoCG: the size of the left atrium is 3.6 cm (normal is up to 4 cm). The end-diastolic size of the left ventricle is 5.8 cm (normal is 4.9-5.5 cm). Ejection fraction 40% (norm - 50-70%). The thickness of the posterior wall of the left ventricle and the interventricular septum is 1.0 cm. Zones of akinesis are noted in the area of the infarction.

1. Identify the clinical syndromes present in the patient;

2.Formulate a diagnosis;

3.What additional examination methods need to be performed? 4. Prescribe

treatment.

Sample answer:

1.The patient has left ventricular chronic heart failure syndrome. This is indicated by complaints of shortness of breath during normal physical activity, which goes away at rest, weakness, increased fatigue, as well as examination data: acrocyanosis and tachycardia.

2.IHD: post-infarction cardiosclerosis. CHF stage IIA, FC II.

3.It is necessary to perform an ECG and chest X-ray, CAG to exclude stenosing ASP

4.ACE inhibitors (perindopril 2 mg/day, increasing to 4 mg/day); β-blockers (bisoprolol starting from 1.25 mg 1 time per day with a gradual increase in dose to the maximum tolerated under blood pressure control), BMCR (spironolactone 25-50 mg), diuretics (furosemide 40 mg) under the control of water-electrolyte balance, antiplatelet agents , statins.

Task 66.

Patient E., 72 years old, was admitted to the cardiology department with complaints of shortness of breath when walking on level ground for a distance of 100 m and climbing one flight of stairs, weakness, fatigue, swelling of the legs and feet. From the anamnesis it is known that for about 22 years he suffered from hypertension with maximum increases in blood pressure up to 220/110 mm Hg. Art. Does not receive regular treatment. Suffering from type 2 diabetes mellitus.

On examination: the condition is moderate. Height 155 cm, weight 102 kg. The skin is of normal color. Slight swelling of the legs and feet. The chest is conical, symmetrical. Respiration rate - 18 per minute. Auscultation over the lungs reveals hard breathing, no wheezing. The boundaries of relative dullness of the heart: right - the right edge of the sternum, left - in the 5th intercostal space 2.5 cm outward from the left midclavicular line, upper - the upper edge of the 3rd rib. On auscultation of the heart, the tones are clear, audible

accent of the 2nd tone in the 2nd intercostal space to the right of the sternum, no noise. The heart rhythm is correct, heart rate is 96 per minute. Blood pressure 180/100 mm Hg. The abdomen is soft and painless. Liver dimensions according to Kurlov: 12x11x8 cm. Abdominal circumference 120 cm.

General blood test: hemoglobin - 132 g/l, leukocytes - 7.4x109/l, erythrocytes - 4.1x1012/l, eosinophils - 2%, band cells - 5%, segmented cells - 68%, lymphocytes - 20%, monocytes - 5 %, ESR - 14 mm/h.

General urine analysis: relative density 1011, acidic reaction, protein 75 mg/day, no glucose, 0 red blood cells in the field of view, 1-2 leukocytes in the field of view.

In biochemical analysisblood - cholesterol level 8.3 mmol/l, glucose 7.8 mmol/l. ECG: sum of R V56 and SV12 >35 mm.

1. Identify the clinical syndromes present in the patient;

2.Formulate a diagnosis;

3.What additional examination methods need to be performed? 4. Prescribe treatment.

Sample answer:

1.Complaints of shortness of breath, weakness, fatigue, swelling of the legs and feet are symptoms of heart failure. Upon examination, the following symptoms were revealed: swelling of the legs and feet, hard breathing during auscultation of the lungs, tachycardia, hepatomegaly, i.e. there are stagnation phenomena in the pulmonary and systemic circulation. In addition, the patient has arterial hypertension.

2.Hypertension stage 2, stage III, the risk is very high. CHF stage IIB, FC III.

3.It is necessary to conduct a chest x-ray and echocardiography, coronary angiography 4. ACE inhibitors (perindopril 2 mg/day with an increase to 4 mg/day); p-blockers (bisoprolol starting from 1.25 mg 1 time per day with a gradual increase in dose to the maximum tolerated under blood pressure control), BMCR (spironolactone 50 mg), diuretics (furosemide 40 mg), statins.

Task 67.

Patient B., 38 years old, was admitted to the cardiology department with complaints of shortness of breath with slight physical exertion,

fatigue, weakness, episodes of suffocation that occur in a horizontal position, swelling of the legs and feet. From the anamnesis it is known that at the age of 17 years, rheumatic heart disease was diagnosed - mitral valve insufficiency.

On examination: the condition is serious. Swelling of the legs and feet. The chest is conical, symmetrical. Respiration rate is 24 per minute. With comparative percussion, a clear pulmonary sound is determined in symmetrical areas of the chest; dullness of the percussion sound is noted on the right below the angle of the scapula. When auscultating over the lungs

- hard breathing, a small amount of moist, silent, fine-bubble wheezing is heard in the lower parts. On palpation of the chest, the apical impulse is detected in the VI intercostal space 3 cm outward from the left midclavicular line. The boundaries of relative dullness of the heart: right - the right edge of the sternum, left - 3 cm outward from the midclavicular line in the VI intercostal space, upper - the upper edge of the III rib. The auscultatory picture corresponds to the existing defect. The heart rhythm is incorrect, heart rate is 103 per minute. Blood pressure 110/65 mm Hg. The abdomen is enlarged in volume due to relaxed ascites, soft, painless. Dimensions of the liver according to Kurlov: 13x12x10 cm. The liver protrudes from under the edge of the costal arch by 3 cm, its edge is rounded, slightly painful.

General blood test: hemoglobin - 132 g/l, leukocytes - 6.81x109/l, erythrocytes - 4.0x1012/l, eosinophils - 2%, band cells - 5%, segmented cells - 67%, lymphocytes - 21%, monocytes - 5 %, ESR -12 mm/h.

General urine analysis: relative density 1010, acidic reaction; protein, glucose are absent; 0 red blood cells in the field of view, 1-2 leukocytes in the field of view.

X-ray of the chest organs: an increase in the shadow of the heart due to the left parts, congestion in the pulmonary circulation.

1. Identify the clinical syndromes present in the patient;

2.Formulate a diagnosis;

3.Additional examination methods; 4.

Prescribe treatment.

Sample answer:

1.Complaints of shortness of breath with little physical exertion, fatigue, weakness, episodes of suffocation that occur in a horizontal position, swelling of the legs and feet are symptoms of chronic heart failure. The examination data reveals congestion in both the pulmonary and systemic circulation, which corresponds to stage IIB of CHF.

2.Chronic rheumatic heart disease: rheumatic heart disease - mitral valve insufficiency. Atrial fibrillation, permanent form. CHF stage IIB, FC IV.

3.Echocardiography and ECG are required.

4.ACE inhibitors (perindopril 2 mg/day, increasing to 4 mg/day); Digoxin 0.25 mg 1 tablet 1 time per day, β-blockers (bisoprolol starting from 1.25 mg 1 time per day with a gradual increase in dose to the maximum tolerated under the control of heart rate and blood pressure), diuretics (furosemide 40 mg), BMCR (veroshpiron, spironolactone, eplerenone) 50-100 mg, statins, anticoagulants (NOACs), taking into account the permanent form of AF. Refer the patient for a consultation with a cardiac surgeon to discuss surgical correction of the defect.

Task 68.

Patient K., 56 years old, was admitted to the hospital with complaints of shortness of breath at rest, predominantly of an inspiratory nature, swelling of the legs, aching pain in the heart, palpitations and irregular heartbeats, heaviness and aching pain in the right hypochondrium. I fell ill 3 months ago for no apparent reason, when I noticed the appearance of shortness of breath with little physical activity. Despite outpatient treatment with diuretics and cardiac glycosides, the patient’s condition progressively worsened, and therefore he was hospitalized.

It is revealed that the fatherand the patient's older brother died of heart failure, although they did not suffer from hypertension or coronary heart disease.

Objectively: the general condition is serious. Orthopnoe. Shortness of breath at rest with a respiratory rate of 28 per minute. Satisfactory nutrition. The skin is pale. Acrocyanosis, weak diffuse cyanosis of the face. There is swelling and pulsation of the neck veins. Severe swelling of the feet and legs. The chest is of the correct shape. Percussion sound is dull in the lower parts of the lungs. Breathing is harsh, in the lower parts there are silent fine rales. The heart area is not externally changed. The apical impulse is diffuse, weakened, and is determined in the intercostal space along the anterior axillary line. The boundaries of relative dullness are significantly expanded in all directions: the right one - 2.0 cm outward from the right parasternal line, the upper one - in the 2nd intercostal space, the left one - coincides with the apical impulse. The heart sounds at the apex are muffled, the P tone is accentuated on the pulmonary artery. Pathological 3rd tone at the apex, there is also a soft systolic murmur. Pulse - 104 per minute, arrhythmic due to frequent (up to 10 per minute) extrasystoles, decreased filling and tension. Blood pressure - 95/70 mm Hg. The abdomen is soft, moderately painful in the right hypochondrium. The liver protrudes 3 cm from under the edge of the costal arch, rather dense, the edge is rounded.

1.Establish a preliminary diagnosis;

2.Outline a plan for additional examination indicating the expected results; 3. Conduct differential diagnostics;

4. Determine treatment tactics.

RESULTS OF ADDITIONAL EXAMINATION:

1. Echocardioscopy: expansion of the heart cavities, slight thickening of the posterior wall of the left ventricle and interventricular septum. Reduction of left ventricular ejection fraction by up to 40%.

2. General blood test: erythrocytes - 4.2x1012/l, Hb - 120 g/l, color. - 0.9; platelets - 400x109/l, leukocytes - 8.0x109/l, band cells - 3%, eosinophils - 2%, segmented - 60%, lymphocytes - 28%, monocytes - 7%, ESR - 10 mm/hour.

3. AST - 0.35 mmol/l, ALT - 0.4 mmol/l, DPA - 200 units, CRP - negative, total protein - 7.8 g/l, albumin - 57%, alpha-1-globulins - 5 %, alpha-2-globulins - 10%, beta-globulins - 9%, gamma globulins - 19%.

4. General urine analysis: beat. weight - 1018, protein - 0.099 g/l, leukocytes - 2-4 in the field of vision, erythrocytes - 3-5 in the field of vision, hyaline casts.

Sample answer:

1. Preliminary diagnosis: dilated (congestive) cardiomyopathy, stage IIB CHF.

2. Additional examination plan: ECG, ECHO-CS, CAG, chest x-ray, general blood test, blood test for AST, ALT, DPA, CRP, total protein and protein fractions, general urinalysis.

3. Differential diagnosis should be carried out with Abramov-Fiedler myocarditis, diffuse infectious-allergic myocarditis, post-infarction cardiosclerosis, effusion pericarditis. Principles of treatment: symptomatic therapy aimed at: - reducing signs of heart failure (cardiac glycosides in small doses, ACE inhibitors, diuretics, BMCRs, peripheral vasodilators, beta-blockers, agents that improve myocardial metabolism); - elimination of extrasystole (cordarone, etatsizin, beta-blockers, potassium preparations); - improvement of the rheological properties of blood (heparin, aspirin).

Task 69.

Patient K., 65 years old, was admitted to the cardiology department with complaints of shortness of breath at rest, worsening in a horizontal position, severe weakness, episodes of rapid heartbeat, interruptions in cardiac function, and a tendency to hypotension up to 100/70 mm Hg.

From the anamnesis it is known that he had not previously sought medical help and did not receive constant therapy. According to the patient, he occasionally measured blood pressure, which for 10 years was about 140-150/90 mmHg. A real deterioration during the month, when about 1 month ago I noticed an intense attack of chest pain, which self-limited within 1 hour, in the following days I began to notice short-term attacks of burning pain in the chest with a slight load, which self-limited with rest, in subsequent days the frequency anginal attacks increased. In addition, about a week ago, an attack of rapid heartbeat developed, episodic “heart palpitations”, he did not seek medical help, the wife began regularly giving bisoprolol 5 mg (which she herself took for palpitations), according to the patient, he no longer notes episodes of rapid heartbeat, but interruptions in heart function occasionally persist. About 3 days later he noticed the appearance of shortness of breath while lying down, the inability to “breathe in a horizontal position”, then over the next 3 days the condition progressively worsened, and nevertheless decided to seek medical help and was hospitalized

On examination: the condition is serious. Height 170 cm, weight 75 kg. The skin is of normal color. Acrocyanosis of the lips. The chest is conical, symmetrical. Respiratory rate - 23 per minute. With comparative percussion in symmetrical areas of the chest, a clear pulmonary sound is determined. On auscultation, vesicular breathing is heard over the lungs; in the lower parts it is weakened. When auscultating the heart, sounds

weakened, arrhythmic, no noise. The heart rhythm is irregular, arrhythmic. Heart rate - 110 per minute Blood pressure 100/70 mm Hg. The abdomen is soft and painless. Liver dimensions according to Kurlov: 9x8x7 cm. No swelling of the lower extremities

General blood test: hemoglobin - 150 g/l, leukocytes - 9.8x109/l, erythrocytes - 4.6x1012/l, eosinophils -1%, band cells - 2%, segmented cells - 67%, lymphocytes - 22%, monocytes - 8 %,

ESR - 26 mm/h.

General urine analysis: relative density 1019, acidic reaction; protein, glucose are absent; 0 red blood cells in the field of view, 1-2 leukocytes in the field of view.

In the biochemical blood test - cholesterol level 6.6 mmol/l, creatinine 144 μmol/l, urea 9.7 mmol/l, glucose 9.8 mmol/l

EchoCG: the size of the left atrium is 4.6 cm (normal is up to 4 cm). The end-diastolic size of the left ventricle is 6.8 cm (normal is 4.9-5.5 cm). Ejection fraction 35% (norm - 50-70%). The thickness of the posterior wall of the left ventricle and the interventricular septum is 1.0 cm. Zones of akinesis are noted in the area of the IVS, apex, pulmonary hypertension of the 1st degree. (pressure in the pancreas 45 mm Hg), bilateral hydrothorax (up to 22 mm of effusion on the right and left)

ECG: tachysystolic rhythm of atrial fibrillation, QS in leads V1-V4, negative T wave in leads V1-V4.

1. Identify the clinical syndromes present in the patient;

2.Formulate a diagnosis;

3.What additional examination methods need to be performed? 4. Prescribe treatment.

Sample answer:

1.The patient has CHF II A, FC 4. This is indicated by complaints of lying at rest, weakness, as well as examination data: tachycardia. The cause of CHF in this situation was a previous myocardial infarction (presumably 1 month ago clinically), early post-infarction angina, atrial fibrillation as a complication of a previous heart attack,

2.IBS. post-infarction cardiosclerosis (NOS). Early post-infarction angina. Rhythm disturbances such as atrial fibrillation. pulmonary hypertension stage 1 bilateral hydrothorax. arterial hypertension stage III risk 4 (very high) CHF stage IIA, FC IV. Type 2 diabetes?

3.It is necessary to perform a coronary angiography (CAG) to exclude stenosing ASP, Holter ECG monitoring and chest x-ray, determine the level of glycated hemoglobin, glycemic profile (on an empty stomach and 2 hours after a meal), determine the GFR (glomerular filtration rate) to adjust the doses of prescribed drugs, ultrasound of the kidneys

4.ACE inhibitors in maximum tolerated doses, beta-blockers (bisoprolol starting from 5 mg 1 time per day with a gradual increase in dose to the maximum tolerated under the control of heart rate), BMCR (spironolactone 50-100 mg), diuretics (furosemide 40 mg) under water control - electrolyte balance, dual antiplatelet therapy, taking into account previous myocardial infarction, statins, digoxin, anticoagulants (taking into account the presence of atrial fibrillation).

It is not possible to determine the duration of the development of rhythm disturbances in the patient, it follows that at the present time sinus rhythm SHOULD NOT be restored (high risk of developing acute cerebrovascular accident after 48 hours of an uncontrolled attack of arrhythmia); after stabilization of the patient's condition, it is necessary to undergo transesophageal echocardiography to exclude thrombosis in the ears of the heart, followed by resolving the issue of the need and advisability of restoring sinus rhythm.

Task 70.

A patient was admitted to the hospital with complaints of an increase in temperature within 2 weeks to 39.20, severe weakness. In the medical history since childhood, there was a congenital heart defect – bicuspid aortic valve. A month ago, an outpatient examination revealed viral hepatitis C.

Objectively:Moderate condition. On auscultation of the heart, there is a diastolic murmur in the aorta and at the Botkin-Erb point. Blood pressure 115/50 mm Hg. Art. Vesicular breathing in the lungs. No wheezing can be heard. Abdomen, soft, painless. Liver +2 cm.

Clinical blood test: L-19 *109; HB -99 g/l; ESR-63 mm/h: leukocyte formula p13 c58 l 22 m 13.

On ECHO-CG: loose mobile vegetations of large sizes on the aortic valve. Hemoculture:

Staphylococcus aureus was isolated.

1. Make a preliminary diagnosis and justify it; 2.Prescribe

treatment;

3. Your further tactics.

Response standard:

1. Taking into account the formation of the disease on a previously changed heart (bicuspid aortic valve), acute onset of the disease, sowing of Staphylococcus aureus from the blood, detection of mobile vegetations on ECHO-CG, the presence of hepatitis C -

Main diagnosis: Acute staphylococcal secondary endocarditis. Related: Viral

hepatitis C

Background: Aortic valve insufficiency 2. Oxacillin 12 g/day, IV

in 4-6 injections for 4-6 weeks.

3. Taking into account the acute course of the disease with an unfavorable prognosis, the presence of loose mobile vegetations according to ECHO-CG data requires consultation with a cardiovascular surgeon to resolve the issue of urgent sanitation of the heart.

Task 71.

A 24-year-old man was admitted to the hospital with complaints of fever of 38.30 C, shortness of breath on exertion, and palpitations. During an outpatient examination (FGL, ultrasound of the abdominal organs, CBC, OAM), the cause of the fever could not be determined. Hospitalized.

Objectively upon admission: The condition is of moderate severity. Consciousness is clear. Edema of the lower extremities. In the lungs, breathing is vesicular, wheezing is not heard. NPV = 22 per minute.

The borders of the heart are expanded to the left, auscultation above the xiphoid process reveals a weakening of the first tone, a rough systolic murmur extending up the left parasternal line to the 2nd intercostal space. Blood pressure -110/ 60 mmHg.

The abdomen is soft, b/w. Liver +3 cm.

An ECHO-CG revealed an irregularly shaped formation on the tricuspid valve, measuring 0.9 x 0.5

In a personal conversationindicated intravenous drug use in the past, but denies current drug use.

1. Make a preliminary diagnosis and justify it; 2.Make a

treatment plan.

Response standard:

1.Taking into account high prolonged fever, heart murmurs, indications of intravenous drug use, the patient:

Main diagnosis: Infectious endocarditis of drug addicts, with the formation of tricuspid insufficiency, subacute course.

Complication: CHF II A FC 3 according to NYHA.

2.Antibacterial therapy: Vancomycin30-60 mg/kg/day, IV 2-3 injections
+Gentamicin 3 mg/kg/day IV or IM in 2-3 doses.

Task 72.

Patient A., 33 years old, complains of weakness, lack of appetite, weight loss, shortness of breath with slight physical activity, worsening in a horizontal position, fever up to 37.6 0C, sweating. Sick for 1.5 months. There is a history of mitral commissurotomy. Objectively: the condition is of moderate severity, pale, low nutrition. Breathing is harsh, carried out in all departments. Heart sounds are loud and rapid. The pulse is 94 beats per minute, and a systolic murmur is heard at the apex. The abdomen participates in the act of breathing; upon superficial palpation it is soft and painless. Blood test: er. - 3.1 x 1012/l; Hb - 99 g/l; c.p. - 0.9; L - 18 x 109/l, p -15%, s62%, l 15%, m8%, ESR-28 mm/hour.

Urinalysis is unremarkable.

Blood test - CRP +++, total protein - 68g/l, total Bilirubin - 22 μm/l. 1.Your

preliminary diagnosis;

2. Plan of additional examination; 3.

Treatment tactics.

Sample answer:

1.Main diagnosis: Subacute secondary infective endocarditis with damage to the mitral valve. Complication: CHF II A FC 3 according to NYHA.

2.ECG, echocardiogram, blood culture tank at least 3 times

3.hospitalization, A\B therapy - parenterally, at least 4-6 weeks with broad-spectrum drugs - possible combinations of empirical antibacterial therapy.

Task 73.

A 23-year-old man complains of an increase in temperature up to 40°C, inspiratory shortness of breath with little physical activity, and long-lasting pain in the heart area not associated with physical activity.

From the anamnesis it is known that he has been using heroin for 5 years. 2 weeks before hospitalization, he noted an increase in temperature to 40°C. The patient took NSAIDs as antipyretics.

On examination: pale skin,clean. Peripheral lymph nodes are not enlarged. Body temperature – 38.8°C. In the lungs, vesicular breathing is carried out in all sections. NPV
– 19 per minute. The heart sounds are clear, at the base of the xiphoid process there is a systolic murmur, intensifying at the height of inspiration with breath holding. Blood pressure – 110/60 mm Hg. Art., heart rate – 100 beats per minute. The abdomen is soft and painless on palpation. The liver protrudes 2 cm from under the edge of the costal arch, the edge of the liver is smooth. Edema of the lower extremities. The effleurage symptom is negative on both sides. Urination is not impaired.

In the CBC: red blood cells – 3.1×1012/l, hemoglobin – 124 g/l, leukocytes – 16.8×109/l, band neutrophils – 15%, ESR – 42 mm/h. In the biochemical blood test - serum albumin - 26 g/l, creatinine - 63 μmol/l, GFR - 98 ml/min/1.73 m2, CRP
– 123 mg/l In the general analysis of urine: specific gravity – 1016, red blood cells – 0-1 in the field of view.

When blood was cultured for sterility, S. aureus, sensitive to oxacillin and ceftriaxone, was isolated twice.

EchoCG: the size of the heart chambers is not enlarged. Mitral valve: the leaflets are sealed, the nature of the movement of the leaflets is multidirectional. Tricuspid valve: the leaflets are compacted, thickened, an average echo-density structure is visualized on the middle and anterior leaflets measuring 1.86 and 1.11×0.89 cm; the nature of the movement of the valves is multidirectional, tricuspid regurgitation of the III–IV degree.

1.Suggest the most likely diagnosis; 2. Justify

your diagnosis;

3.Draw up and justify a plan for additional examination of the patient;

4. Patient management tacticsnon-drug and drug therapy. Justify your choice.

Response standard:

1. Primary acute staphylococcal infective endocarditis.

Complication: Tricuspid valve insufficiency grade 3. CHF IIA, NYHA FC 3.

2. Based on 2 major (tricuspid insufficiency, vegetations on the tricuspid valve and positive blood culture) and 2 minor (febrile fever, "gate of entry" in the form of IV drug use) diagnostic criteria for infective endocarditis, as well as laboratory signs of systemic inflammatory response syndrome.

3. Recommended: repeat CBC, blood culture, OAM, urine test according to Nechiporenko, biochemical blood test, chest X-ray, ECG, ECHO-CG in dynamics; Ultrasound examination of the kidneys; consultation with a cardiac surgeon, narcologist.

4. Immediate hospitalization. Avoid taking drugs. Oxacillin 12 g/day, IV in 4-6 injections for 4-6 weeks. Taking into account the pathology of the valves, there are indications for surgical treatment - tricuspid valve replacement surgery.

Task 74.

Patient L., 32 years old, was admitted to the clinic with complaints of increased body temperature to 38.7°C, swelling of the legs, increased abdominal volume, pain in the right hypochondrium, and pinpoint rashes on the legs. A few months ago I had a tooth extraction.

She considers herself sick for a month and a half when she first noted the above complaints.

I didn't ask for help. She took antipyretics on her own. Over the past two weeks, she has noted an increase in swelling in the legs, an increase in the volume of the abdomen, and the appearance of pain in the right hypochondrium. Objectively: condition of moderate severity, body temperature 37.9°C, pale skin with a icteric tint, elements of a hemorrhagic rash on the skin of the lower extremities, swelling of the feet and legs. Lymph nodes are not palpable. The breathing in the lungs is harsh, there is no wheezing. The percussion sound is clear, pulmonary, and no local dullness is detected. On percussion of the heart, the right border is 4 cm to the right of the right edge of the sternum, other borders are within normal limits. On auscultation, heart sounds are rhythmic, heart rate is 105 per minute, there is a weakening of the first sound over the xiphoid process, and a systolic murmur that increases with inspiration. The abdomen is tense, painless, a positive symptom of fluctuation. Liver +6 cm from the edge of the costal arch. The edge of the spleen is palpated.

Complete blood count: hemoglobin - 106 g/l, erythrocytes - 3.6×1012/l, leukocytes - 18×109/l, band neutrophils - 7%, segmented neutrophils - 80%, lymphocytes - 9%, monocytes - 3% , eosinophils - 1%, ESR - 49 mm/h. General urine analysis: yellow, transparent, normal pH, specific gravity - 1015, protein - no, leukocytes - 1-2 in the field of view, no red blood cells. Biochemical blood test: bilirubin - 38.8 mmol/l, AST - 75, ALT - 99, creatinine - 0.108 mmol/l, glucose - 5.7 mmol/l, cholesterol
– 5.0 mmol/l, potassium - 4.2 mmol/l. Hemoculture: growth of Staphylococcus aureus in one of the 3 samples.

1. Formulate a diagnosis;
2. Draw up an examination plan to clarify the diagnosis;
3. Decide your treatment plan.

Sample answer:

1.Primary staphylococcal infective endocarditis, acute, localized on the tricuspid valve Complication: tricuspid valve insufficiency. CHF IIa, FC 2.

2.ECHO-CG, biochemical blood test: K, Na, creatinine, glucose, coagulogram (INR, PTI, RFMC, APTT, fibrinogen), rheumatoid factor, CRP, procalcitonin.

3.When isolating Staphylococcus epidermidis and Staphylococcus aureus caused by a methicillin-resistant strain of Staphylococcus aureus, (Flu)cloxacillin or oxacillin 12 g/day IV in 4-6 injections, 4-6 weeks is used in treatment.

Task 75.

Patient L. has been working as a teacher for 48 years and came to the clinic with complaints of pain in the metacarpophalangeal, proximal interphalangeal joints of the hands, wrist, shoulder, ankle joints, and metatarsophalangeal joints of the feet; weakness in the hands; morning stiffness until lunchtime; low-grade fever in the evenings, general weakness.

From the anamnesis. Considers himself sick for about 3 months, when pain in the joints appeared. She did not seek medical help, was treated with non-steroidal anti-inflammatory ointments, without improvement. Over the past month, pain and swelling have appeared in the joints of the hands, feet, wrists and ankles, morning stiffness during the day, and low-grade body temperature. I lost 6 kg during my illness.

General condition is satisfactory. The skin is clean, cyanosis, and no edema. Peripheral lymph nodes are not enlarged. Breathing is vesicular, no wheezing. NPV – 18 per minute. Heart sounds are clear, the rhythm is correct. Heart rate – 78 beats per minute. Blood pressure - 120/70 mm Hg. Art. The abdomen is soft and painless. The liver is at the edge of the costal arch.

Local status: brushes are correct. II, III proximal interphalangeal joints and II, III metacarpophalangeal joints are painful and swollen. Pain in the wrist joints, shoulder joints. Right hand grip is 80%, left hand grip is 70%. Assessment of well-being on a visual analogue scale (VAS) – 60 mm.

Complete blood count: red blood cells – 3.5×1012/l, hemoglobin – 131 g/l, leukocytes – 8.6×109/l, eosinophils – 1%, band neutrophils – 8%, segmented neutrophils – 55%, lymphocytes – 30%, monocytes - 6%, ESR - 54 mm/h.

Biochemical blood tests: glucose – 3.2 mmol/l, total bilirubin – 15 μmol/l, creatinine – 54 μmol/l; total protein – 76 g/l, albumin – 50%, globulins: α1 – 6%, α2
– 14%, β - 12%, γ - 17%, CRP - 17.2 mg, fibrinogen - 5.8 g/l, uric acid - 0.24 mmol/l (normal 0.16-0.4 mmol/l).

Rheumatoid factor: ELISA - 62 IU/ml (normally up to 15 IU/ml). Antibodies to DNA are negative. ACCP >200 U/ml.

On x-rays of the hands and feet: the joint spaces are moderately narrowed at the level of the proximal joints of the hands. Single erosions are identified. The bone structure is changed due to epiphyseal osteoporosis at the level of the metacarpophalangeal joints, metatarsophalangeal joints, and single cyst-like clearings.

1.Suggest the most likely diagnosis; 2. Justify the
diagnosis;

3.Draw up and justify a plan for additional examination of the patient;

4.What group of drugs would you recommend to the patient as part of combination therapy? Justify your choice.

Sample answer:

1.Seropositive rheumatoid arthritis, ACCP-positive, early stage, highly active, erosive (radiographic stage 2), FC-2.

2.The diagnosis of “rheumatoid arthritis (RA)” was established on the basis of the patient’s complaints of symmetrical pain in the joints of the hands, the presence of morning stiffness; medical history data (the patient notes the onset of pain and joint syndromes 3 months ago);

Establishing the degree of RA is based on the number of painful and swollen joints during examination, VAS and ESR data; in the future, the degree of disease activity requires clarification using the DAS28 formula. The stage of RA was established based on radiography of the joints of the hands and feet.

3.The patient is recommended: chest x-ray (to exclude lung damage), ultrasound examination of joints (synovitis, tenosynovitis) or MRI of joints (a more sensitive method for detecting synovitis at the onset of rheumatoid arthritis than standard joint x-ray).

4.Cytotoxic immunosuppressants and genetically engineered drugs. Methotrexate (MTX) is the first-line drug for the treatment of RA with proven efficacy and safety. Prescribed in combination with folic acid at a dose of 5 mg/week. Uof patients who first started treatment with MTX, the ratio

effectiveness/safety/cost in favor of MTX monotherapy compared with combination therapy of MTX and other standard disease-modifying anti-inflammatory drugs or monotherapy with genetically engineered drugs.

CRITERIA for assessing competencies and rating scales

Grade "unsatisfactory"(not accepted) or absence formationcompetencies	**Grade "satisfactory" (passed) or satisfactory (threshold) level of competence development**	**Rating "good" (passed) or sufficient level mastering competence**	**"Excellent" grade (passed) or high level of competence development**
The student's inability to independently demonstrate knowledge when solving tasks, lack of independence in applying skills. The lack of confirmation of the development of competence indicates negative results in mastering the academic discipline.	The student demonstrates independence in applying knowledge, skills and abilities to solve educational tasks in full accordance with the model given by the teacher; for tasks the solution of which was demonstrated by the teacher, it should be considered that the competence is formed at a satisfactory level.	The student demonstrates independent application of knowledge, skills and abilities when solving tasks similar to the samples, which confirms the presence of developed competence at a higher level. The presence of such competence at a sufficient level indicates a firmly established practical skill	The student demonstrates the ability to be completely independent in choosing a way to solve non-standard tasks within the discipline using knowledge, skills and abilities acquired both in the course of mastering this discipline and related disciplines; competence should be considered developed at a high level.

Criteria for assessing test control:

percentage of correct answers	Marks
91-100	Great
81-90	Fine
70-80	satisfactorily
Less than 70	unsatisfactory

When grading tasks with multiple correct answers, one error is allowed.

Criteria for assessing situational tasks:

Mark	**Descriptors**			
	understanding the problem	**analysis of the situation**	**skills solutions to the situation**	**professional thinking**
Great	complete understanding problems.Everything requirements, required for	high ability analyze situation, draw conclusions	high ability select method solutions Problems,	high level professional thinking

	task, completed		confident skills solutions to the situation	

Fine	full understandingProblems. All requirements for task completed	ability to analyze a situation and draw conclusions	abilitychoose metho dproblem solving confident problem solving skills	sufficient levelprofessional thinking. Allowed one or twoinaccuracies in the answer
satisfactorily	partial understanding of the problem. Most of the job requirements completed	satisfactory ability to analyze a situation and draw conclusions	satisfactorys skillssolutions to the situation,difficulties Withchoice method problem solving	sufficient levelprofessional thinking. More than two inaccuracies in the answer or an error in the sequence are allowed solutions
unsatisfactory	misunderstandingProblems. Many of the requirements fortask, Notcompleted. No answer. Did not have attempts to solve the problem	low ability to analyze the situation	insufficientskills solutions situations	absent