METHODOLOGICAL RECOMMENDATIONS FOR INDEPENDENT WORK

Module name: Basics of Internal diseases -1
Discipline code: OVB 4301-1
Name of EP: 6B10101 "General medicine»
Amount of study hours (credits): 150 /5
Course of study: 4
Semester of study: VII
Student's independent work: 30

Shymkent, 2022

Guidelines for independent work are developed in accordance with the modular curriculum of the EP "General Medicine", discussed and approved at a meeting of the department.

Protocol No. 11 of "08" 2022

Head Chair, candidate of medical sciences, acting associate professor Asanova G.K.

1. Topic No. 1 FibrosingAlveolitis (FA)

2. Purpose: To get acquainted with the syndromes of respiratory failure, to study the epidemiology, etiology and pathogenesis of the disease, its clinical manifestations, differential diagnosis, complications and treatment of FA.

Mastering the algorithm for making a preliminary diagnosis, drawing up a plan for further examination with the participation of other specialists for making a diagnosis of idiopathic, exogenous allergic and toxic alveolitis.

3. Tasks:

1.Select literature on the topic of the lesson.

2. Make a presentation and visual material.

3. Compose 4-5 test tasks / 1-2 situational tasks on the topic of the lesson.

4. Performance / assessment form: Presentation, reference to literature. CPC verification is carried out during the SRSP.

5. Criteria for the implementation of the CDS (requirements for the assignment): indicated in the syllabus.

6. Delivery: 2 day

7. Literature: indicated in the syllabus.

8. Control (questions, tests, tasks, etc.).

Test questions:

1) What form of idiopathic interstitial pneumonia corresponds to Hamman-Rich syndrome:

a. Commoninterstitialpneumonia
b. AcuteInterstitialPneumonia
c. Desquamativeinterstitialpneumonia
d. Nonspecificinterstitialpneumonia
e. Lymphocyticinterstitialpneumonia

2) For exogenous allergic alveolitis, the formation of specific antibodies of the class is characteristic:

a. IgM
b. IgA
c. IgG
d. IgE
e. Alloftheabove

3) Type of allergic reaction with exogenous allergic alveolitis:

a. Allergic reaction of type I (immediate type reaction, reagin, anaphylactic, atopic type)
b. Allergic reaction of type II (cytotoxic type).
c. Allergic reaction of type III (tissue damage by immune complexes - Arthus type, immunocomplex type)
d. Type IV allergic reaction, or delayed-type allergic reaction (delayed-type hypersensitivity, cellular hypersensitivity).
e. All of the above is incorrect.

4) At what age does exogenous allergic alveolitis develop more often?

a. Breastage
b. Preschoolage
c. Schoolage
d. Teenageyears
e. Anyage

5) In the treatment of idiopathic fibrosingalveolitis, all of the listed drugs are used, except:

a. Glucocorticosteroids
b. Immunosuppressants
c. D-penicillamine
d. Colchicine

e. Synecode
6) Starting dose of glucocorticosteroids in a patient with severe acute onset of exogenous allergic alveolitis:
a. 1.1.3 mg / kg
b. 2. 0.5 mg / kg
c. 3.1 mg / kg
d. 4. 1.5 mg / kg
e. 5.2 mg / kg
7) Duration of maintenance therapy for corticosteroids in the acute course of exogenous allergic alveolitis
a. 6 months
b. 3 months
c. 2 months
d. 1 month
e. 2 weeks
8) With the development of pneumofibrosis, the drug of choice is:
a. Prednisone
b. Azathioprine
c. Colchicine
d. D-penicillamine
e. N-acetylcysteine
9) To the clinical manifestations of idiopathic fibrosingalveolitis:
a. Drycough
b. Dyspnea
c. Mid-BubbleLocalWheezing
d. “Drumsticks”, “watchglasses”
e. Acrocyanosis
10) X-ray changes with idiopathic fibrosingalveolitis all but:
a. Decreased transparency of lung tissue - a symptom of "frosted glass"
b. Homogeneous segmental shadows with a concave border
c. Cellularenlightenment - “cellularlung”
d. Shallowfocal, diffusedshadows
e. Narrowingofthepulmonaryfields
Answers: 1-2, 2-3, 3-3, 4-3, 5-5, 6-3, 7-2, 8-4, 9-3, 10-2.

Task.
A 12-year-old childwasadmittedtotheadmissiondepartmentwithcomplaintsoflethargy, weightloss, unproductivecough, shortness of breath during physicalexertion. It is known thatthe boyspent 2 monthsonvacationin the countryside, helpedin collectinghay. Auscultation in the basalpart sof small bubblin grales. X-ray – honey combpattern withs catteredfoci of smallshadows. Results of bacteriological examinations: Thermophilusactinomycetes. Whatistheпreliminarydiagnosis?
Tasks
1. Whatisyourpreliminarydiagnosis?
2. Yourrecommendationsforexaminationandtherapy
3. Whatdiseasesshouldbedifferentiated?
Answer: ExogenousAllergicAlveolitis
1. Theme № 2. Lung tumors
2. Purpose: To get acquainted with the syndromes of respiratory failure, to study the epidemiology, etiology and pathogenesis of the disease, its clinical manifestations, differential diagnosis, complications and treatment of lung tumors.
Mastering the algorithm for making a preliminary diagnosis, drawing up a plan for further examination with the participation of other specialists for making a diagnosis.

3. Tasks:
1. Select literature on the topic of the lesson.
2. Make a presentation and visual material.
3. Compose 4-5 test tasks / 1-2 situational tasks on the topic of the lesson.
4. Implementation / Evaluation Form: Presentation
CPC verification is carried out during the SRSP.
5. Criteria for the implementation of the CDS (requirements for the assignment): indicated in the syllabus.
6. Delivery time: 2 day
7. Literature: indicated in the syllabus.
8. Control (questions, tests, tasks, etc.).
1. The most convincing sign of volume reduction of the lung lobe is:
a) concavity of the interlobar fissure
b) root expansion
c) high aperture dome location
d) intense dimming of the lobe
2. The most important skiological signs in the diagnosis of lung hamartochondroma include:
a) inclusion of lime, clarity of contours
b) uniformity of structure
c) "path" to the root
d) focal shadows in the surrounding lung tissue
3. The difference between pulmonary tuberculoma and peripheral cancer is based on:
a) analysis of the nature of the shadow outline and its structure
b) tumor localization
c) the size of education
d) pleural changes
4. For central endobronchial lung cancer, the most characteristic is:
a) Pneumomediastinum
b) Atelectasis
c) blackout at the root
d) focal shadow
5. The difference between peripheral cancer and pulmonary tuberculoma is based on:
a) analysis of the nature of the shadow outline and its structure
b) tumor localization
c) the size of education
d) pleural changes
6. The structure and contours of peripheral cancer are better determined by:
a) overview shots in direct projection
b) side views
c) fluorograms
d) tomograms
7. Does the surrounding lung tissue change in peripheral lung cancer?
a) does not change
b) sometimes a heavy path from the tumor to the root
c) there are often focal shadows around
d) the tumor is always surrounded by pneumosclerosis
8. What is most typical for apical cancer such as a Pancosttumor:
a) shadow in the region of the apex of the lung
b) decay cavity
c) shadow in the apex of the lung in combination with destruction of the rib

d) “path” to the root
9. For central cancer with predominantly endobronchial growth, it is most characteristic:
a) impaired bronchial obstruction
b) nodular root formation
c) local enhancement of pulmonary pattern
d) nodular formation in the basal area
10. On the chest x-ray, signs of impaired bronchial patency are determined. On bronchograms, a concentric narrowing of the lumen with uneven contours. Your conclusion:
a) Central cancer with endobronchial growth
b) Central cancer with exobronchial growth
c) Central cancer with peribronchial growth
d) Peripheral lung cancer
11. A clearly defined, inhomogeneous, rounded formation, with smooth contours, located at the top of the lung, with sickle-shaped enlightenment, is most characteristic of:
a) Hamartomas
b) Hemangiomas
c) Echinococcus
d) lung cancer
12. What are the most frequent localization of mediastinal neuroma?
a) there is no predominant localization
b) anterior mediastinum
c) rib-vertebral angle
d) cardio-diaphragmatic angle

TEST RESPONSE STANDARD

1. a
2. a
3. a
4. b
5. a
6. d
7. b
8. c
9. a
10. a
11. c
12. c

1. Theme №3 Acute respiratory failure (ONE)
2. Purpose: To get acquainted with the syndrome of acute respiratory failure, to study the epidemiology, etiology and pathogenesis of the disease, its clinical manifestations, differential diagnosis, complications and treatment of acute respiratory failure.
Mastering the algorithm for making a preliminary diagnosis, drawing up a plan for further examination with the participation of other specialists for making a diagnosis of ONE.
3.Quests:
1.Select literature on the topic of the lesson.
2. Make a presentation and visual material.
3. Compose 4-5 test tasks / 1-2 situational tasks on the topic of the lesson.
4.Form / Evaluation Form: Presentation
CPC verification is carried out during the SRSP.
5. Criteria for the implementation of the CDS (requirements for the assignment): indicated in the syllabus.
6. Delivery time: 3 day
7. Literature: indicated in the syllabus.
8. Control (questions, tests, tasks, etc.).

1. The main mechanism of ventilating acute respiratory failure
1) hypoventilation
2) diffusion through the alveolo-capillary membrane
3) violation of ventilation-perfusion relations in the lungs
4) hyperventilation
5) lung bypass surgery
2. The main causes of venous mixing
1) Local hypoventilation
2) Reduced alveolar ventilation
3) Disruption of gas diffusion through the alveolo-capillary membrane
4) Violations of ventilation-perfusion relations in the lungs
5) Increased intrapulmonary bypass surgery
3. Pathogenetic factors of acute respiratory failure with open pneumothorax
1) shutting out of the lung ventilation on the sore side
2) pronounced bypass of blood in the lung on the healthy side
3) Pendulum-like gas movements from one lung to another
4) Mediastinal flotation during breathing
5) Severe circulatory disorders in the pulmonary circle
4. Hypocapnia with shortness of breath associated with
1) A change in the affinity of hemoglobin for oxygen
2) Reducing the content in the red blood cell of 2.3 dfg
3) Hypoxemia leading to shortness of breath
4) The development of total hypoventilation
5) Disruption of cellular cytochromes and disruption of oxygen utilization by cells
5. The mechanisms of acute respiratory failure with extensive pneumonia
1) reduction of the respiratory surface of the lungs
2) sputum obstruction
3) Restriction
4) Hyperventilation
5) Venous discharge
6. Mechanisms of development of otter respiratory failure in bronchial asthma
1) total hypoventilation
2) local hypoventilation
3) Local blood flow in the lung
4) Violation of the diffusion properties of the lung
5) Total impaired blood flow
7. Hyperventilation leads to
1) vasoconstriction of cerebral vessels
2) respiratory acidosis
3) Respiratory alkalosis
4) Reduce cardiac output
5) Hypoxemia
8. Violation of gas exchange in shock lung is associated with
1) Impaired oxygen diffusion through the alveolar-capillary membrane
2) By decreasing the concentration of oxygen in the inhaled air
3) The development of direct bypass blood in the pulmonary circulation
4) Local hypoventilation due to obstruction of individual bronchioles
5) Total hypoventilation
9. The cause of acute respiratory failure in multiple fractures of the ribs without injuring the lungs
1) Changes in the gas composition of the blood will not occur, since the lung tissue remains intact

2) Hypocapnia develops due to shortness of breath
3) Metabolic acidosis develops
4) Hypercapnia develops in connection with total hypoventilation
5) Hypoxemia develops due to an increase in the affinity of hemoglobin for oxygen
10.increase in extraction coefficient indicates
1) Decreased oxygen delivery to tissues
2) Hypoxemia
3) Reduced tissue perfusion
4) Hypovolemia
5) Increasing the concentration of 2-3 dfg
11. The most informative diagnostic criterion is one
1) tidal volume
2) minute volume of breath
3) Respiratory rate
4) Blood gas composition
5) Tachycardia
12. Criteria for transferring the patient to IVL
1) the oxygen tension in arterial blood is 120 mm RT. Art.
2) the oxygen tension in arterial blood is below 60 mm Hg. Art.
3) The voltage of carbon dioxide in arterial blood is 35 mm RT. Art.
4) The vital capacity of the lungs is 80% of the due
5) Saturation of hemoglobin with oxygen - 95%
13. Tracheostomy performed
1) With combined injury
2) With submandibular phlegmon
3) With a fracture of the lower jaw
4) For long-term ventilation
5) To improve the conditions for rehabilitation bronchoscopy
14. Indicators of hypoxic hypoxia
1) cyanosis
2) alveolar ro2
3) Arterial ro2
4) Tidal volume
5) Pso2 arterial blood
15. Symptoms of hypercapnia without hypoxemia
1) cyanosis of the skin and visible mucous membranes
2) severe peripheral spasm
3) Redness of the skin
4) sweating
5) Arterial hypotension
16. Indicators of respiratory distress syndrome
1) reduction of arteriovenous oxygen difference
2) high pressure jamming pulmonary capillaries
3) Increased intrapulmonary bypass grafting
4) Polyuria
5) Hypothermia
17. Symptoms of hypoxia
1) impaired consciousness
2) cyanosis of the skin and visible mucous membranes
3) Bradypine

4) Decreased arterial po2
5) Decrease in arteriovenous oxygen difference
18. Consequences of alveolar hypoventilation
1) hypoxemia
2) hypoxemia and hypercapnia
3) hypercapnia
4) hypoxemia and hypocapnia
5) hypocapnia
19. The oxygen tension in arterial blood is
1) 30 mm RT. Art.
2) 40 mm RT. Art.
3) 60 mmHg. Art.
4) 70-100 mm RT. Art.
5) 110-180 mm RT. Art.
20. The normal value of the minute volume of breathing in an adult
1) 2-4 l / min
2) 6-8 l / min
3) 10-12 l / min
4) 13-15 l / min
5) 18-20 l / min
21. Indicators of acid-base condition in severe pneumonia
1) respiratory alkalosis
2) respiratory acidosis
3) metabolic acidosis
4) Metabolic alkalosis
5) Within the normal range
22. Non-invasive techniques for obtaining information about the gas composition of the blood
1) photoplethysmography
2) capnometry and pulse oximetry
3) Rheography
4) Dopplerography
5) Sonography
23. Changes in the acid-base state with pneumothorax
1) respiratory and metabolic alkolosis
2) respiratory acidosis and metabolic alkolosis
3) Metabolic and respiratory acidosis
4) Metabolic alkolosis and hypoxemia
5) Respiratory acidosis and hypoxemia
24. The growth of oxygen extraction by tissues is manifested in
1) Oxygen concentrations in arterial blood
2) The difference between the concentration of oxygen in the alveolar air and arterial blood
3) The difference between the oxygen content in arterial blood and mixed venous blood
4) Dynamics of pH and ve indicators
5) Increase mod
25. Co2 content in alveolar air
1) 1.0-1.5 vol.%
2) 2.0-2.5 vol.%
3) 3.0-4.0 vol.%
4) 5.0-5.6 vol.%
5) 6.2-7.0 vol.%

1. Theme №4 Sarcoidosis of the lungs

2. Purpose: To get acquainted with the syndromes of respiratory failure, to study the epidemiology, etiology and pathogenesis of the disease, its clinical manifestations, differential diagnosis, complications and treatment of hemorrhage.

Mastering the algorithm for making a preliminary diagnosis, drawing up a plan for further examination with the participation of other specialists for making a diagnosis of SL.

3.Quests:

1.Select literature on the topic of the lesson.

2. Make a presentation and visual material.

3. Compose 4-5 test tasks / 1-2 situational tasks on the topic of the lesson.

4.Form / Evaluation Form: Presentation

CPC verification is carried out during the SRSP.

5. Criteria for the implementation of the CDS (requirements for the assignment): indicated in the syllabus.

6. Delivery time: 4 day

7. Literature: indicated in the syllabus.

8. Control (questions, tests, tasks, etc.).

Task № 1

Patient R., 42 years old, complains of weakness, shortness of breath, dry cough, fever up to 37.3 ° C, periodic joint pain. Sick for 3 months. Objectively: the condition is satisfactory. NPV 16 in 1 minute. In the lungs, vesicular breathing.Hemodynamic parameters without features. The abdomen is soft, painless. On the chest radiograph: an increase in the intrathoracic lymph nodes, reinforced looped pattern in the basal and lower parts of the lungs.

Tasks:

• 1. Formulate a preliminary diagnosis.

• 2. List instrumental studies to clarify the diagnosis.

• 3. Your patient management tactics.

Answer:

• 1. Sarcoidosis.

• 2. Bronchoscopy with biopsy to determine the presence of sarcoid granulomas.

• 3. Management and treatment of the patient in a TB dispensary.

Task № 2.

A woman, 40 years old, began to notice weakness of shortness of breath, dry cough, low-grade fever, and sometimes joint pain in the last 3 to 4 months. An X-ray revealed an increase in intrathoracic lymph nodes, an enhanced looped pattern in the basal and lower parts of the lungs.

1) What disease can you think of?

2) Plan for clarifying the diagnosis.

3) What changes can be detected on the skin?

4) Classification of sarcoidosis

5) Tactics of reference.

Answer:

1. Aboutsarcoidosis.

2. Bronchoscopy with a biopsy (tubercle rashes of a proliferative nature on the bronchial mucosa). Histologically, these changes are numerous, subepithelially located sarcoid granulomas.

3. Skin changes in sarcoidosis can be divided into reactive - erythema nodosum, which occurs during the acute and subacute course of the disease, and skin sarcoidosis proper - specific polymorphic disorders that are difficult for visual recognition and require a biopsy.

4. Currently, sarcoidosis of the chest is divided into 5 stages (from 0 to IV). 0st - there are no changes on the chest radiograph, Ist. - lymphadenopathy of the intrathoracic lymph nodes; lung parenchyma not changed, IIst. - lymphadenopathy of the intrathoracic lymph nodes; pathological changes in the lung parenchyma,

IIIst. - Pathology of the pulmonary parenchyma without lymphadenopathy of the intrathoracic lymph nodes, IV st. - irreversible pulmonary fibrosis.
5. Further management and treatment is carried out in the pulmonology department.

1. Theme №5 Pulmonary heart (PH)
2. Purpose: To get acquainted with the syndromes of respiratory failure, to study the epidemiology, etiology and pathogenesis of the disease, its clinical manifestations, differential diagnosis, complications and treatment of drugs.
Mastering the algorithm for making a preliminary diagnosis, drawing up a plan for further examination with the participation of other specialists for making a diagnosis of drugs.
3.Quests:
1.Select literature on the topic of the lesson.
2. Make a presentation and visual material.
3. Compose 4-5 test tasks / 1-2 situational tasks on the topic of the lesson.
4.Form / Evaluation Form: Presentation
CPC verification is carried out during the SRSP.
5. Criteria for the implementation of the CDS (requirements for the assignment): indicated in the syllabus.
6. Delivery time: 5 day
7. Literature: indicated in the syllabus.
8. Control (questions, tests, tasks, etc.).
Task № 1.
A 65-year-old man was taken to a hospital with complaints of shortness of breath during physical exertion (walking for 15 m), orthopnea, and peripheral edema. During the examination: blood pressure 90/60 mm RT. Art., pulse rhythmic, 100 per minute; swelling of the cervical veins with a central venous pressure of 12 cm of water. st .; systolic murmur, which is carried out on the vessels of the neck, a noticeable delay in pulsation of the carotid arteries and swelling on the legs.
Preliminary diagnosis?
Prescribe a treatment?

Task № 2.
Patient D., 53 years old, a carpenter by profession, was admitted to the clinic in February 2000 with complaints of shortness of breath, aggravated by physical exertion, cough with sputum of a mucopurulent nature, palpitations, swelling of the extremities, sweating. From the anamnesis: for 23 years he smokes a pack of cigarettes a day. In 1958, 1985 he suffered bilateral pneumonia. Since 1987, a persistent cough with sputum of a mucopurulent nature, episodes of fever in spring and autumn. During periods of exacerbation, antibiotic treatment was carried out, expectorant with a good effect. Since 1990, noted an increase in shortness of breath, since the fall of 1998 - constant swelling of the extremities, increasing in the evening, received cardiac glycosides, diuretics. Over the past year, due to severe shortness of breath, he could not go out. On admission: reclining in bed, cyanotic flush of cheeks, acrocyanosis, swelling of the legs, feet. The chest is emphysema. BH 24 per minute, the lower boundaries of the lungs are lowered, the mobility of the pulmonary edge is limited, percussion above the lungs is a box sound. Breathing is weakened, exhalation is elongated, dry treble and bass rales are heard over the entire surface of the lungs, with auscultation over the trachea, the exhalation duration is 6 seconds. the boundaries of relative cardiac dullness are not determined. Heart sounds are muffled, the rhythm is correct, the emphasis is on II tone above the pulmonary artery, heart rate 120 per minute, blood pressure 120/90 mm Hg. The liver protrudes 4 cm from the edge of the costal arch. Hepato-jugular reflux is positive.
Blood test: Hb 17.7%, er. 6x1012 / l, lake. 10.8x109 / l, P. 6%, s. 89%, L. 4%, M. 8%, ESR 2 mm / h. Hematocrit 60%. In serum: total. white 70 g / l, cold 6.9 μmol / L, total. beat. 15 μmol / L, AST 16 IU (norm 5-20), ALT 20 IU, C-reactive protein ++. P-graphy of the chest organs: the lungs are emphysematous, the

interstitial and vascular pattern of the basal sections is strengthened. The heart is enlarged due to the right ventricle, the arc of the pulmonary artery bulges out. ECG: EOS rejected to the right. Sinus tachycardia.Signs of hypertrophy and overload of the right heart. "S" type ECG. FVD: VC 80%, Tiffno test 53%, forced expiration in 1 sec (FEV) 58%. Blood gas composition: pCO2 51 mm Hg; pO2 56 mm Hg Art.,% saturation of hemoglobin with oxygen 78%, pH 7.35.
1. Formulate a diagnosis.
2. List the main syndromes available to the patient.
3. What determines the prognosis of the disease?
4. Treatment tactics.

Tasks № 3.
Patient K., 43 years old, accountant. For 15 years, she suffers from left-sided fibrothorax (in her youth she was ill for a long time with pulmonary tuberculosis). A month ago, pain appeared in the right lower limb, it became edematous, acquired a cyanotic color. The ambulance team is called in connection with a sudden sensation of acute shortage of air, sudden shortness of breath (up to 40-60 breaths per 1 min); profuse sweat, cyanosis with a gray tint. Tachycardia up to 140-160 in 1 min. Pulse and blood pressure are not determined; on the ECG - signs of acute overload of the right heart.
1. What is your suspected diagnosis?
2. Tactics of patient management?

Task № 4
A 62-year-old woman with congestive heart failure developed pneumonia and developed a pleural effusion. A pleural puncture was performed to determine the nature of pleural effusion (a consequence of congestive heart failure or pneumonia?).
1. The diagnosis?
2. Prescribe treatment?

1. Theme №6 Vascular nephropathy
2. Purpose: To get acquainted with the syndromes: nephrotic, nephritic, to study the epidemiology, etiology and pathogenesis of the disease, its clinical manifestations, differential diagnosis, complications and treatment of vascular nephropathies.
Mastering the algorithm for making a preliminary diagnosis, drawing up a plan for further examination with the participation of other specialists for making a diagnosis of nephropathy
3.Quests:
1.Select literature on the topic of the lesson.
2. Make a presentation and visual material.
3. Compose 4-5 test tasks / 1-2 situational tasks on the topic of the lesson.
4.Form / Evaluation Form: Presentation
CPC verification is carried out during the SRSP.
5. Criteria for the implementation of the CDS (requirements for the assignment): indicated in the syllabus.
6. Delivery time: 6 day
7. Literature: indicated in the syllabus.
8. Control (questions, tests, tasks, etc.).
Task №1
Patient N., 23 years old, was admitted with complaints of swelling on the face, around the eyes, on the legs, in the lumbar region, an increase in body temperature to 37.1 - 37.3 in the evenings, increasing weakness, decreased performance, fatigue, headache and dizziness, shortness of breath when walking.
Medical history. In childhood, he often suffered from tonsillitis; at the age of 14, pathological changes were found in the analysis of urine. At the age of 19, while serving in the army after cooling, there were lower

back pain and swelling on the face, after treatment he was demobilized. Last deterioration after a cold. Edema sharply increased, there was a headache, weakness. Objectively: a state of moderate severity, the skin is pale, swelling on the face, legs, scrotum, lower back and anterior abdominal wall. From the lungs without features. The pulse is 88 rpm, rhythmic, intense, full. HELL 185/110 mm Hg The apical impulse is resistant, the left border of the heart along the midclavicular line is 5 m / r; upon auscultation, the tones are clear, rhythmic, the accent of the II tone above the aorta. The abdomen is soft, palpation kidneys are inaccessible, the symptom of effluxing is negative.
General blood test: Er-3.1 x 109 / l, HB-92 g / l, C.P. -1.0, reticulocytes 0.3%, L - 6.0 x 109 \ l, formula without features, ESR - 36 mm / h, total protein 46 g / l, alb. -39.4%, glob. - 60, 6%, alpha1 - 4.4%, alpha2 - 12.7%, beta - 15.2%, gamma - 28.3%>, SRV (+++), fibrinogen 8.2 g / l, cholesterol 9, 6 mmol / l.
General urine analysis: straw-yellow color, alkaline reaction, specific weight 1008, protein 3.63 g / l, er. 8-10 in p / sp., L - 1-2 in p / sp., Single gealine cylinders, waxy 4-6 in p / sp. Ribber test glomerular filtration 32 ml / min., Tubular reabsorption 94.5%, blood creatinine 0.62 mmol / l, daily diuresis 2.6 l, daily protein loss 9.3 g.

Tasks:

1. Explain the origin of the symptoms.
2. Highlight syndromes
3. Make a preliminary diagnosis.
4. Survey plan, expected results.
5. What do you expect to receive urine tests for Zimnitsky?
6. The treatment plan.

Task № 2.

Patient A., 52 years old. Complaints of dull aching pain in the lower back on the right, frequent urination, especially at night and in small portions, fever up to 37.5 ° C, weakness, lack of appetite. In the last six months, headaches began to bother, mainly in the occipital region.
Anamnesis of the disease: At the age of 25, with gestation, a diagnosis of pregnant pyelonephritis was made, until now periodically noted weakness, malaise, but did not pay attention to it. The last deterioration began three days ago after hypothermia.
Objectively: satisfactory condition, physiological skin integument, temperature 37.9 ° C. Vesicular breathing. Heart sounds are clear, rhythmic. Pulse 86 beats in minutes HELL 160/105 mm. Hg. Art. The abdomen on palpation is soft, moderate soreness over the pubis. Pasternatsky’s symptom is positive on both sides.
Complete blood count: red blood cells - 3.5 x 1012 / l, Hb - 125 g / l, white blood cells - 10 x 109 / l, ESR - 24 mm / hour.
Urinalysis: specific gravity - 1014, protein - 0.099 g / l, erythrocytes - 0-1 in the field of view, white blood cells-18-25 in the field of view, flat epithelium - single in the field of view.
Bacteriological examination of urine: 2700 000 bacteria in 1 ml of urine.
Test according to Nechiporenko: red blood cells - 1000, white blood cells - 7 000.

Tasks:

1. Highlight the symptoms, group them into syndromes, explain the pathogenesis.
2. Highlight the leading syndrome. Make a preliminary diagnosis.
3. Make a survey plan, write the expected results.
4. The treatment plan.

The standard for solving the problem 1
I. Major complaints and medical history indicate kidney disease. The disease is chronic, as the anamnesis indicates: at the age of 14, pathological changes were detected in the analysis of urine, at the age of 19, during military service, after cooling, there were lower back pain and swelling on the face, after treatment it was discharged. Last deterioration after a cold. Edema sharply increased, there was a headache, weakness.

The etiology of the disease is indicated by frequent tonsillitis in childhood. Probably, the onset and development of pathology is associated with streptococcal infection.
Complaints of headache and heaviness in the head, weakness, fatigue, and shortness of breath with moderate physical exertion indicate the development of complications from the cardiovascular system.
II. Existing symptoms can be grouped into the following syndromes:
1. Nephrotic. As a result of immune disorders, a change in the basement membrane occurs, which leads to protein loss in the urine, hypoproteinemia, dysproteinemia and the development of hypooncotic edema.
This syndrome in the task is indicated by:
• massive proteinuria (in the general analysis of urine 3.63 g / l, daily loss of protein 9.3 g)
• hypoproteinemia 46 g / l
• dysproteinemia albumin -39.4%, globulins -60.6% (alpha2 and Y globulinemia),
• hypercholesterolemia -9.6 mmol / l
• swelling on the face, legs, scrotum, lower back and anterior abdominal wall
2. Urinary syndrome indicates pathomorphological changes in the glomeruli. Proves kidney damage:
proteinuria - 3.63 g / l
microhematuria -8-10 in s / sp
cylindruria - waxy 4-6 p / sp
3. Arterial hypertension syndrome - Retention of sodium and water ions with an increase in bcc, accumulation of sodium ions in the vessel wall, followed by edema and increased sensitivity to pressor agents, activation of the renin-angiotensin-aldosterone system leads to the development of arterial hypertension.
-A / D 185 / 110mm Hg
- heart rate is intense
- emphasis II tone over the aorta
- the development of cardiomegaly - the left border of the heart according to SCR
- heart failure - shortness of breath when walking
4. Chronicrenalfailuresyndrome:
Developing as a result of the gradual death of nephrons and the progressive deterioration of glomerular filtration (glomerular insufficiency) - 32 ml / min and a decrease in tubular renal function (tubular reabsorption of 94.5%, which reaches such an extent that the kidneys can no longer maintain the normal composition of the internal environment of the body. Blood creatinine rises -0.62 mmol / l., The patient develops polyuria - daily diuresis - 2.6 l;
Due to the toxic effect of uremic toxins on the bone marrow, anemic syndrome develops - (normochromic, normocytic, hyporegenerative anemia), the effect of toxic nitrogenous slag on the cerebral cortex causes the patient to become weak, reduce working capacity, fatigue, headache. Headache can also be associated with arterial hypertension (vascular encephalopathy syndrome).
5. Intoxication and inflammatory syndrome
Due to immune inflammation of the glomeruli, the following develop:
- subfebrile condition;
- CRP (+++),
- hyperfibrinogenemia,
- accelerated ESR;
- gammaglobinemia 28.2%
6. Clinical anemnestic syndrome (see above).
III Preliminary diagnosis.
DS Chronic glomerulonephritis, a mixed version, the stage of severe clinical manifestations, slowly progressing phase, exacerbation phase, chronic renal failure II B, symptomatic anemia.
IV. Survey
1. Increased residual nitrogen, urea,
2. Zimnitsky test - hypoisostenuria, nocturia

V. Treatment:
1. A diet with a restriction of sodium chloride, complete, balanced (protein 1 g per 1 kg of patient weight, plus the amount of protein lost per day), rich in fruit and vegetable juices.
2. Mode - security, stationary.
3. Medication
- Corticosteroids (for example, prednisone 40 mg per day).
Immunosuppressants (e.g. cyclophosphamide 0.05; 2 p. Per day).
antiplateletagents
- Anticoagulants (heparin 5 thousand units x 4 r. Per day subcutaneously).
- Treatment of arterial hypertension (ACE inhibitors under the control of blood pressure).
- To increase the colloid osmotic pressure of the plasma - ivpolyglucin; iv albumin.
The standard of solving the problem №2
Major complaints indicate kidney and urinary tract disease.
I. Highlight the symptoms.
1. Dumb pain in the lumbar region can occur as a result of an extension of the renal capsule or pelvis due to inflammatory or congestive changes in the kidney.
2. Frequent urination, especially at night and in small portions, indicatedysuric disorders.
3. Headaches, increased blood pressure 160/105 - a manifestation of arterial hypertension resulting from the activation of the renin-angiotensin-aldosterone system, due to ischemia of the glomerular capillaries.
4. An increase in temperature to 37.5 ° C is the result of an inflammatory process.
5. Weakness, lack of appetite - signs of intoxication
6. A positive symptom of Pasternatsky arises as a result of an extension of the renal capsule due to inflammatory changes in the kidney.
7. White blood cells - 10x109 / l, ESR - 24 mm / hour. - signs of inflammation
8. Elevated protein (0.099g / l), white blood cells in the urine (18-25 p / sp), as well as bacteriuria (2700 000 bacteria in 1 ml of urine) indicate inflammation in the pyelocaliceal system.
II. Existing symptoms can be grouped into the following syndromes:
1. Urinary:
white blood cells in the general analysis of urine 18-25 in n / a,
protein - 0,099g / l
in 1 ml of urine 2700000 microbial bodies
in the analysis of urine according to Nechiporenko leukocytes - 7000 in 1 ml
2. Painful:
Dull lumbar pain
Positive symptom of Pasternatsky
3 Hypertension:
A / D 160/105
Headaches
4. Intoxication and inflammatory:
Temperature increase up to 37.5□C
Weakness, lack of appetite
5. Clinical and anamnestic
An anamnesis indicates a chronic course of the disease.
At the age of 25, with gestation, a diagnosis of pregnant pyelonephritis was made, until now periodically noted weakness, malaise, but did not pay attention to it, headaches began to bother the last six months. The last deterioration began three days ago after hypothermia.
II. Preliminary diagnosis.
Chronic primary pyelonephritis, exacerbation.Symptomatic arterial hypertension.CRF 0.
III. Survey Plan and Expected Results.
1. Zimnitsky test: a decrease in the relative density of urine and the prevalence of nocturnal urine output

To clarify the type of microflora and determine its sensitivity to antibiotics - a cultural study.
For the exclusion of chronic renal failure - determination of nitrogen-releasing function.
Blood for urea, creatinine, residual nitrogen - within normal limits
Ultrasound - allows you to determine the size of the kidneys, echogenicity of the parenchyma, the presence of calculi. In chronic pyelonephritis, the density of the renal parenchyma is increased, an expansion of the pyelocaliceal system is observed.
Excretory urography - detects a decrease in the tone of the upper urinary tract, flattened and rounded corners of the fornixes, narrowing and elongation of the necks, the openings of the cups.
IV. Treatment
1.Diet 10
2. Water regimen - the introduction of fluid in fractional doses and the excretion of urine in a volume of 1.5 l / s. In this case, antimicrobials reach an adequate concentration in the urine. The liquid is recommended in the form of mineral waters, fortified drinks, juices, fruit drinks, compotes. Cranberry juice or fruit drink is especially useful, as it has an antiseptic effect on the kidneys. During the period of exacerbation, the use of salt is limited to 5-8 g per day, and in case of violation of the outflow of urine and hypertension - up to 4 g per day. Throughout the entire period of the disease, the intake of spicy foods is limited.
Bed mode.
Drug treatment:
For the treatment of chronic pyelonephritis, various anti-infective drugs are used - uroseptics:
- antibacterial therapy taking into account microflora;
- sulfonamides;
- quinolones;
Nonspecific anti-inflammatory drugs (voltaren). They have an anti-inflammatory effect and reduce the reactive phenomena caused by the infectious process.
Renal blood flow improving drugs (trental, chimes, heparin)
Antihypertensive therapy (ACE inhibitors, calcium antagonists)
Herbal medicine: bearberry (bear ears), lingonberry leaves, cranberry juice, etc.

1. Theme №7 tubulointerstitial nephropathy (TIN)
2. Purpose: To get acquainted with the syndromes: nephrotic, nephritic, to study the epidemiology, etiology and pathogenesis of the disease, its clinical manifestations, differential diagnosis, complications and treatment of TIN.
Mastering the algorithm for making a preliminary diagnosis, drawing up a plan for further examination with the participation of other specialists for making a diagnosis of TIN.
3. Tasks:
1.Select literature on the topic of the lesson.
2. Make a presentation and visual material.
3. Compose 4-5 test tasks / 1-2 situational tasks on the topic of the lesson.
4. Implementation / Evaluation Form: Presentation
CPC verification is carried out during the SRSP.
5. Criteria for the implementation of the CDS (requirements for the assignment): indicated in the syllabus.
6. Delivery: 7 days
7. Literature: indicated in the syllabus.
8. Control (questions, tests, tasks, etc.).
Task 1
A 35-year-old woman, a teacher, turned to a nephrologist about facial swelling, pain in the lumbar region. From the anamnesis, it is known that 13 years ago during pregnancy, which ended in a timely and safe delivery, moderate proteinuria and swelling of the face were noted. Subsequently, she did not give up urine

tests, edema periodically continued to appear, about which she limited fluid intake, often took diuretics. As a result of a decrease in 71 sensitivities, their doses had to be increased. Over the past 2-3 months, edema has intensified, despite the constant use of diuretics. Concomitant diseases: vegetative-vascular dystonia of the hypotonic type, chronic gastritis, migraine-like headaches. On examination: the skin is pale with a grayish tint, the face is pasty. Weight 63kg. HELL 115/75 mm Hg Rumbling along the lumbar region is painless on both sides, however, pain is noted upon palpation of paravertebral points, a positive symptom of Laseg. Complete blood count: hemoglobin 110 g / l, white blood cells 5.2 × 109 / l, erythrocyte sedimentation rate of 7 mm / h. Urinalysis: specific gravity 1008, proteinuria 0.066 g / l, white blood cells 4–6 in the field of view, red blood cells 3-4 in the field of view. Biochemical analysis of blood: creatinine 158.4 μmol / L (normal up to 110), potassium 3.6 mmol / L, uric acid 7.5 mg / dl (normal up to 6.5). Ultrasound of the kidneys: a symmetric decrease in kidney size to 85x50 mm, a decrease in parenchyma thickness to 13-14 mm, wavy contours, in the region of the papillae - hyperechoic inclusions.

Tasks:

1. What are the nephrological syndromes observed in the patient?

2. What is your suspected diagnosis?

3. What complaints, medical history, additional laboratory and instrumental studies need to be clarified?

4. What diseases should be used for differential diagnosis?

5. What treatment do you recommend if the diagnosis is confirmed?

Answer:

1. The patient has minimal urinary syndrome, chronic renal failure syndrome with impaired concentration and filtration function of the kidneys.

2. The most likely diagnosis is chronic interstitial nephritis (presumably analgesic nephropathy). CKD stage 2 (GFR = 69.60 ml / min). Osl .: Chronic renal failure conservative stage. The presence of pain, adherence to self-medication indirectly testify in favor of the medicinal genesis of kidney damage.

3. It is necessary, during a further survey, to establish the fact of abuse of analgesics and NSAIDs for migraine and 75 osteochondrosis of the spine with radicular syndrome, the presence of nocturia. To clarify the concentration function, a Zimnitsky test is shown. In addition to ultrasound, computed tomography of the kidneys may be required to identify a characteristic pattern of cicatricial changes and calcification in the papillae.

4. A differential diagnosis should be made with chronic pyelonephritis, chronic latent glomerulonephritis in the stage of chronic renal failure, urolithiasis, and tuberculosis of the kidneys.

5. The exclusion of analgesics is crucial in the treatment.

1. Theme №8 Milestone control №1

2. Purpose: The main goal is to check the level of mastery of the next section of the subject.

3. Tasks:

• Testing

• Control of the acquisition of practical skills

• Filling in a mini - medical history

4. Form of performance / evaluation:

• Testing

• Control of the acquisition of practical skills

• Filling in a mini - medical history

5. Criteria for the implementation of the CDS (requirements for the assignment): indicated in the syllabus.

6. Delivery: 8 day

7. Literature: indicated in the syllabus.

8. Control (questions, tests, tasks, etc.):

Questions program for midterm control 1

Tasks of midterm control 1 (test tasks, tickets and other forms indicated in syllabuses - in thematic plans and in the forms of conducting midterm control)

1. Theme №9 Arterial hypotension (AH)

2. Purpose: To get acquainted with the syndrome of arterial hypotension, to study the epidemiology, etiology and pathogenesis of the disease, its clinical manifestations, differential diagnosis, complications and treatment of hypertension.

Mastering the algorithm for making a preliminary diagnosis, drawing up a plan for further examination with the participation of other specialists for making a diagnosis of hypertension

3. Tasks:

1.Select literature on the topic of the lesson.

2. Make a presentation and visual material.

3. Compose 4-5 test tasks / 1-2 situational tasks on the topic of the lesson.

4. Implementation / Evaluation Form: Presentation

CPC verification is carried out during the SRSP.

5. Criteria for the implementation of the CDS (requirements for the assignment): indicated in the syllabus.

6. Delivery time: 9 day

7. Literature: indicated in the syllabus.

8. Control (questions, tests, tasks, etc.).

Situational tasks.

1. A 35-year-old patient complains of weakness and a decrease in blood pressure to 100 and 60 mmHg. Art., the disappearance of hair in the armpits and pubis, constant nausea, sometimes vomiting. Pigmentation of skin folds is noted. In the blood, an increase in hematocrit, a decrease in sodium and chlorides, an increase in potassium, and a decrease in 17-ketosteroids in the urine. ECG lengthening QT. Set a diagnosis.

2. A 55-year-old patient complains of swelling on the lower extremities, dry skin, increased loss of hair and eyebrows, pain in muscles and joints, a feeling of “crawling creeps” in the hands. Blood pressure up to 105 and 60 mm RT. Art. Decreased appetite, nausea, flatulence, constipation.

Objectively: the patient is inhibited, hypomimia, a rough voice timbre are noted. The thyroid gland is enlarged (IIst.), T4 - 1.2 mmol / L, T3 - 1.3 mmol / L.

Diagnosis?

3. A 35-year-old woman recently underwent a protracted labor complicated by heavy bleeding. After this, the patient began to worry about weight loss, hair loss in the armpits, on the pubis and eyebrows, decreased sweating and salivation, bone pain, decreased appetite, vomiting, diarrhea

Objectively: HELL 100/55 mm RT. Art., osteoporosis of bones, anemia, leukopenia, cholesterol 9.5 mmol / l, in the urine decrease in 17-hydroxycorticosteroids.

Set a diagnosis.

4. A 36-year-old patient suffers from duodenal ulcer. He suddenly felt dizzy and had a fit of short-term loss of consciousness.

Objectively: the skin is pale, moist, blood pressure 80/60 mm RT. Art., heart rate 110 per minute. The vesicular breathing, no wheezing, NPV 20 per minute. The abdomen is soft, marked soreness in the pyloroduodenal zone, tension of the abdominal muscles.

Establish a preliminary diagnosis.

5. A 26-year-old patient, suffering from hypotension for a long period, suddenly dizzy, weakness, sweating, and an attack of short-term loss of consciousness appeared.

Objectively: rhythmic heart sounds, 90 per minute, blood pressure 70/50 mm RT. Art. From the internal organs pathology is not detected.

Establish a preliminary diagnosis.

6. A 32-year-old patient with hypotension developed dizziness after getting out of bed, weakness for a short period of time. Then all the symptoms went away on their own. At the time of dizziness HELL 75/60 mm RT. Art., then blood pressure independently increased to 105/80 mm RT. Art.
What is the cause of this condition.
7. A 28-year-old patient after hypothermia had pain in the left part of the chest during breathing, a cough with sparingly separated sputum of a "rusty color", the temperature rose to 39 ° C, with chills, shortness of breath. Then joined weakness, dizziness in an upright position. In the lungs in the lower parts of crepitus, dullness of percussion sound. Rhythmic heart sounds 110 per minute, blood pressure 100/60 mm RT. Art.
Establish a preliminary diagnosis.
8. In a 40-year-old man, a master of sports in wrestling, a prophylactic examination revealed blood pressure of 100/60 mm RT. Art., heart rate 55 per minute.
What are the causes of low blood pressure.
Answer: Physiological arterial hypotension
9. A 45-year-old patient complains of severe headaches, photophobia, fever up to 38 ° C.
Positive symptoms of Krenig and Brudzinsky were detected objectively, neutrophilic leukocytosis in the blood with a left shift, accelerated ESR up to 40 mm / hour, blood pressure 100/55 mm Hg. Art.
What is the cause of hypotension.
10. In a 65-year-old patient, stage II hypertension, constantly takes 10 mg renitec. per day, suddenly increased pressure to 220/110 mm RT. Art. In order to reduce blood pressure, she took 2 tablets of 0.00075 clonfellin under her tongue. After 30 minutes, she suddenly lost consciousness when getting out of bed.
Objectively: consciousness is preserved, somewhat inhibited. Vesicular respiration 18 per minute. Cardiac tones rhythmic 100 per minute, blood pressure 95/60 mm RT. Art.
What is the cause of hypotension.
11. In a 45-year-old patient after eating soup, which stood for a day on a table in the kitchen, clean loose stools appeared without mucus and blood, nausea, repeated vomiting, the temperature rose to 38 ° C, weakness, dizziness. Before that, she was not sick. Rhythmic heart sounds 110 per minute, blood pressure 95/65 mm RT. Art. The abdomen is soft, rumbling is noted
Establish a preliminary diagnosis.
12. Patient 35 years old. Ill acutely. Complains of headache, nasal congestion, muscle pain, fever up to 40 ° C, chills.
Objectively: the pharynx is hyperemic, vesicular breathing, NPV 18 per minute, rhythmic heart sounds 110 per minute, blood pressure 90/70 mm RT. Art. Belly without features. Natural settings are not changed.
What is the cause of hypotension.

1. Theme №10 Infectious endocarditis (IE)
2. Purpose: To get acquainted with heart failure syndromes, to study the epidemiology, etiology and pathogenesis of the disease, its clinical manifestations, differential diagnosis, complications and treatment of IE.
Mastering the algorithm for making a preliminary diagnosis, drawing up a plan for further examination with the participation of other specialists for making a diagnosis of IE.
3. Tasks:
1.Select literature on the topic of the lesson.
2. Make a presentation and visual material.
3. Compose 4-5 test tasks / 1-2 situational tasks on the topic of the lesson.
4. Implementation / Evaluation Form: Presentation
CPC verification is carried out during the SRSP.
5. Criteria for the implementation of the CDS (requirements for the assignment): indicated in the syllabus.
6. Delivery: 10 day
7. Literature: indicated in the syllabus.

8. Control (questions, tests, tasks, etc.).

Task № 1

Patient C, 25 years old, complains of marked general weakness, sweating, fever up to 38.1 ° C, which is accompanied by chills, shortness of breath with light physical exertion, asthma attacks at night, gradually stopping while sitting, attacks of rapid irregular heartbeats that occur suddenly and stop within 4-6 hours, transient swelling of the legs and feet. A history of prolapse of the mitral valve without regurgitation. A year ago, a diagnostic curettage was carried out in a gynecological hospital, the next day, a temperature increase was first observed (maximum - up to 37.8 ° C), a course of antibacterial therapy was carried out, with effect (the temperature returned to normal), after which the patient was discharged home. However, two days after discharge, the temperature rises resumed to subfebrile digits, with chills, in the future the temperature reached 38.7 ° C. She independently took sumamed, without effect. When examined by a gynecologist, data on the inflammatory process in the small pelvis were not received. Gradually, weakness and shortness of breath increased, fever persisted, for which she took NSAIDs, with a temporary effect. I didn't contact a doctor. A week ago, an attack of rapid heartbeat suddenly developed, which was accompanied by an increase in shortness of breath and co-controlled independently after 4 hours. With a second attack, she was hospitalized in the clinic. On examination, the state of moderate severity. The Constitution is asthenic. Body temperature 37.4 ° C. The skin and mucous membranes are moderately pale, clean. On the conjunctiva - single hemorrhage. Acrocyanosis.Swelling of the legs and feet. Hypermobility of joints is noted. BH - 20 per minute, hard breathing, is carried out in all departments of the lungs, no wheezing. A cardiac impulse is not detected.

Heart: the left border is 1 cm outward from the left midclavicular line, the right border is along the right edge of the sternum, and the upper border is along the lower edge of the III rib. Heart sounds are muffled, a third tone is heard. The first tone at the apex is weakened, after which a noise is heard that is conducted to the left submuscular region. Heart rate -122 per minute, heart rhythm abnormal, blood pressure - 100/70 mm RT. Art. The abdomen is soft, painless in all departments, the liver does not extend beyond the edge of the costal arch along the right midclavicular line, a slightly painful spleen pole is palpated (dimensions 11x7 cm).

In blood tests: hemoglobin - 9.7 g%, erythrocytes - 3.4 million, white blood cells - 9.6 thousand (p / a - 7%, neutrophils - 64%, lymphocytes -19%), platelets -134 thousand , ESR - 48 mm / h, total protein - 6.5 g%, albumin - 3.8 g% (58%), alpha-1 - 3%, alpha-2 - 8%, beta - 5%, gamma - 27% CPV +++, latex test ++, IgG - 2850 mg%, creatinine -1.4 mg%, total bilirubin - 1.1 mg%.

In urinalysis: pH - 5, specific gravity - 1014, traces of protein, sugar, no acetone, red blood cells - 8-10 in the field of view, white blood cells -1-2 in the field of view.

On radiographs of the chest organs: the second, third and fourth arches along the left contour of the heart are slightly enlarged, the contrasted esophagus deviates along a large radius arc, the pleural sinuses are free.

ECG is attached.

Give written answers to the following questions.

• Perform a diagnostic search.
• After the 2nd stage of the diagnostic search, formulate a preliminary diagnosis.
• Identify the survey plan and the need for additional research.
• Formulate a clinical diagnosis and specify diagnostic criteria.
• What are the indications for surgical treatment for this disease?
• What is the optimal treatment strategy for the patient at the moment?

At the 1st stage of the diagnostic search, a combination of complaints is characteristic, on the one hand, for the infectious process (pronounced general weakness, sweating, fever up to 38.1 ° C, chills), and on the other, for heart disease with the development of heart failure and paroxysmal tachyarrhythmia, apparently atrial fibrillation or atrial flutter with a variable coefficient of conduct (shortness of breath with small physical exertion, asthma attacks at night, which gradually stop in the sitting position, attacks are frequent of irregular heartbeats that occur suddenly and stop within 4-6 hours, passing swelling of the legs and feet), makes the patient suspect the development of infectious endocarditis. This diagnosis is supported by

anamnesis data such as the presence of mitral valve prolapse (a predisposing factor), the appearance of fever after gynecological intervention (a trigger factor that directly led to bacteremia), the ineffectiveness of NSAIDs and short-term courses of antibacterial therapy.

At the 2nd stage of the diagnostic search during examination, cardinal signs of this disease were revealed: a new noise of regurgitation (mitral), splenomegaly, as well as fever, signs of dilatation of the left ventricle (which is due to the development of mitral regurgitation and confirms the diagnosis of heart failure) , severe myocardial damage (gallop rhythm), auscultatory - a picture of atrial tachyarrhythmia.

At the 3rd stage of the diagnostic search, additional data were revealed in favor of the diagnosis of "infectious endocarditis" - leukocytosis with a left shift, anemia, an increase in ESR, dysproteinemia, CPB +++, an increase in immune parameters (RF, IgG), signs of hematuric variant of nephritis (in the general analysis of urine), the development of atrial flutter with a conduction coefficient of 2: 1 - 3: 1 was confirmed (on an ECG), the enlargement was mainly in the left chambers of the heart (on radiographs).

Thus, most likely, the patient develops a subacute secondary (against the background of mitral valve prolapse) infectious endocarditis complicated by glomerulonephritis.

To verify the diagnosis, it is necessary first of all to carry out triple blood culture at the height of the fever and echocardiography (transthoracic and transesophageal) to detect vegetation on the mitral valve and to clarify the degree of mitral regurgitation, ejection fraction of the left ventricle, and also to exclude pericarditis. It is also necessary to do a urinalysis according to Nechiporenko, a Reberg test (to clarify the nature and severity of glomerulonephritis), to determine the coagulogram.

It is possible to make a diagnosis of a certain endocarditis (pathological criteria: microorganisms isolated from vegetation, emboli or myocardial abscesses, or pathomorphological changes - vegetation or myocardial abscesses, histologically confirmed; clinical criteria: two large criteria, or one large and three small criteria , or five small criteria), possible endocarditis (the research results are consistent with the diagnosis of endocarditis, but for a certain diagnosis there are not enough criteria, and in rejected endocarditis, nnye not fit) and to reject the diagnosis (if there is an accurate alternative diagnosis, regression of symptoms in antibiotic therapy for up to four days, no pathological signs of endocarditis in the operating room or autopsy material at antibiotikote¬rapii to four days).

Indications for surgical treatment for infectious endocarditis are resistance to antibiotics of various groups for 3-4 weeks; heart failure progressing due to valvular deformation (not myocarditis!); identification of pathogens resistant to antibiotic therapy (fungi * Pseudomonas aeruginosa, etc.); endocarditis of the prosthesis; abscesses of the myocardium, valvular ring, intracardiac purulent fistulas! "large (more than 10 mm), loose, mobile vegetations on the valves or chords (transesophageal echocardiography), which threaten the development of thromboembolism.

First of all, the patient needs to stop the paroxysm of atrial fibrillation that developed within her within the next 1.5 days by iv administration of 5 mg of verapamil (isoptin) followed by iv drip of 10 ml of 10% novocainamide solution on 100 ml of physiological saline under the control of blood pressure (with inefficiency, iv administration of cordon-ron or nibentan, as well as EIT) is possible. Start iv antibiotic therapy with 20-30 million units of penicillin per day (and with a decrease in body temperature, a tendency to decrease acute phase indicators to continue infusion for 4 weeks) in combination with i / m administration of 0.24 g of gentamicin day for 10 days (followed by a break). In addition, therapy for heart failure (ACE inhibitors, small doses of metoprolol, diuretics), antiarrhythmic therapy with drugs of class IA (quinidine), class 1C (allapinin, ethacisin, pro-paphenone) or class III (cordaron) are indicated. The development of the patient's immune glomerulonephritis requires solving the issue of the appointment of small doses of prednisone.

Task number 2

Patient A., 26 years old, was admitted to the hospital with complaints of fever up to 38 ° C, accompanied by chills, night sweats, decreased appetite, swelling of the legs, heaviness in the right hypochondrium.

From the anamnesis it is known that the patient grew and developed normally. He graduated from high school, college. From the age of 17 he worked as a courier. The last three years has not had a permanent job. Smokes for 12 years before a pack of cigarettes a day. According to the mother, over the past three years she

has been using narcotic substances (heroin). Heredity is not burdened. Of the past illnesses, he notes scarlet fever in childhood, about a year ago he suffered severe pneumonia, was treated in a hospital. An allergic history is not burdened.

Considers herself ill for two months, during which he notes a fever up to 38 ° C, accompanied by chills, night sweats, general weakness. He went to the doctor at the place of residence. Radiography of the lungs revealed no pathological changes. The condition is regarded as SARS. He took biseptol, then sumamed (azithromycin), without a significant effect. Over the past two weeks, he noted the appearance of edema on the legs, heaviness in the right hypochondrium.

On examination, the state of moderate severity. Body temperature is 37.7 ° C, the skin is pale with a bluish tinge, multiple traces of injections in the elbow bends, swelling of the feet and legs. Lymph nodes are not palpable. In the lungs, harsh breathing, no wheezing. Percussion sound is clear pulmonary, local dullness is not detected. With percussion of the heart, the right border is 2 cm to the right of the right edge of the sternum, other borders are within normal limits. With auscultation, heart sounds are rhythmic. Heart rate - 110 per minute, a weakening of the first tone above the tricuspid valve is noted. Here systolic murmur is heard, amplified by inspiration. Swollen cervical veins are noted. The abdomen is soft, painless. Liver +3 cm from the edge of the costal arch. The edge is rounded, soft elastic consistency. The edge of the spleen is palpated. The symptom of striking is negative on both sides.

In a clinical blood test: hemoglobin - 10.0 g / l, red blood cells - 3.9 x 1012 / l, white blood cells - 15 x 109 / l (s / I - 7%, s / I - 80%), lymphocytes -9 %, monocytes - 3%, eosinophils -1%, ESR - 55 mm / h. SRV ++++.

In the general analysis of urine: specific gravity - 1017, protein - 0.03 d, no sugar, white blood cells - 2-3 in the field of view, no red blood cells.

On the ECG: sinus rhythm, normal EOS position, heart rate -110 per minute, high (up to 3 mm) P waves in leads II, III, aVF, biphasic T waves in leads V2-V4.

When radiography of the chest, a slight protrusion of the right contour of the heart. Focal and infiltrative changes ¬ not identified.

With echocardiography, there is an increase in the diastolic size of the right ventricle to 2.7 cm, the right atrium to 4.5 cm. Vegetation and perforation of the tricuspid valve flap, tricuspid regurgitation of the P-III degree are noted.

Give written answers to the following questions.

• Perform a diagnostic search.
• After the 2nd stage of the diagnostic search, formulate a preliminary diagnosis.
• Identify the survey plan and the need for additional research.
• Formulate a clinical diagnosis and specify diagnostic criteria.

Prescribe a treatment and justify it

At the first stage of the diagnostic search for complaints of a rise in body temperature up to 38 'within two months, one can speak of fever of unknown origin, the main causes being infections, tumors and diffuse diseases of the connective tissue. First of all, it is necessary to exclude the infectious genesis. In addition, swelling of the legs and heaviness in the right hypochondrium, which may be due to both stagnation in a large circle of blood circulation, and primary liver damage with the development of hypoalbuminemia. The most important thing in the history of life is intravenous drug use, which requires the exclusion of parenteral infections. The clinical picture may be due to acute or chronic hepatitis (although the absence of jaundice is not entirely clear if the mother thinks of a severe liver damage leading to hypo ¬ albuminemia). In addition, infectious endocarditis must be included in the differential diagnosis circle. You can think about some diffuse diseases of the connective tissue, in particular about systemic lupus erythematosus (edema can be explained by the development of lupus nephritis). Combinations are also possible (for example, hepatitis and lupus).

At the 2nd stage of the diagnostic search, in addition to fever, swelling and enlarged liver, pallor of the skin with a bluish tinge (as a result of a combination of anemia and heart failure), an expansion of the right

border of the heart in combination with signs of tricuspid valve insufficiency - weakening of the first tone and systolic murmur were revealed aggravated by inspiration, and with swelling
The cervical veins, which also reflects frequent over a large circle of blood circulation and allows us to regard the swelling as stagnant. The detection of splenomegaly is also extremely important. Considering the combination of fever with chills and notes, the first occurrence of heart disease (tricuspid valve insufficiency), splenomegaly and a risk factor - intravenous drug addiction, you should first think about the development of infectious endocarditis in the patient.
Preliminary diagnosis: “Primary subacute infectious endocarditis with lesions of the tricuspid valve, of moderate severity. Tricuspid valve insufficiency.The insufficiency of blood circulation in the PB stage, 2 FC. ” A rather long period of development of the main symptoms (two months) speaks about the subacute course of endocarditis.
At the 3rd stage of the diagnostic search, laboratory anemia revealed anemia, an increase in ESR up to 55 mm / h, and other signs of a general inflammatory syndrome (CRP ++++). Proteinuria and leukocyturia can reflect both congestive kidney damage and latent glomerulonephritis in the framework of the main disease. Signs of hypertrophy of the right atrium on the ECG indicate its overload in the framework of the developed malformation of the tricuspid valve, sinus tachycardia is associated with both fever and heart failure. In addition, we can think about the development of immune myocarditis, as evidenced by the two-phase T waves in the chest leads. In addition, daily monitoring of ECG by Holter is necessary (identification of possible arrhythmias in the framework of myocarditis), transthoracic and transesophageal echocardiography (confirmation of developed heart disease and possible detection of vegetation on the valve), ultrasound of the abdominal cavity organs (confirmation of hepatosplenomegaly). chest x-ray (assessment of heart size), triple blood culture at the height of the fever (for seeding of the pathogen endocarditis with subsequent correction of antibiotic therapy), as well as blood tests for markers of viral hepatitis. HIV infection, syphilis.
The diagnosis should be formulated as follows: “Primary subacute infectious endocarditis with damage to the tricuspid valve and the development of myocarditis (?), Nephritis (?). moderate course. Tricuspid valve insufficiency.Circulatory failure of the Central Bank to herds, 2 FC."
Combined a / b therapy is indicated - until blood cultures are obtained, benzylpenicillin is 1-2 million units 4 times a day in combination with gentamicin 0.08 g 3 times a day (with a break in gentamicin injections after 10 days and repeated urine tests) . the appointment of ACE inhibitors in the maximum tolerated doses, metoprolol (under the control of blood pressure and heart rate), veroshpiron 50-1.00 mg per day. When confirming the diagnosis of myocarditis, an additional appointment of 15-20 mg of prednisolone inside is indicated. After suppressing the activity of the inflammatory process, the issue of surgical intervention should be addressed. Given the use of drugs, it is necessary to prescribe both preventive and antibacterial therapy)

1. Theme №11 Cardiomyopathy
2. Purpose: To get acquainted with the syndromes of heart failure, to study the epidemiology, etiology and pathogenesis of the disease, its clinical manifestations, differential diagnosis, complications and treatment of ILC.
Mastering the algorithm for making a preliminary diagnosis, drawing up a plan for further examination with the participation of other specialists for making a diagnosis of CMP.
3. Tasks:
1.Select literature on the topic of the lesson.
2. Make a presentation and visual material.
3. Compose 4-5 test tasks / 1-2 situational tasks on the topic of the lesson.
4. Implementation / Evaluation Form: Presentation
verification is carried out during the SRSP.
5. Criteria for the implementation of the CDS (requirements for the assignment): indicated in the syllabus.
6. Delivery: 11 days

7. Literature: indicated in the syllabus.

8. Control (questions, tests, tasks, etc.).

Task number 1

Patient K., 56 years old, was admitted to the hospital with complaints of shortness of breath at rest, mainly of an inspiratory nature, swelling of the legs, aching pain in the heart, palpitations and interruptions in the heart, heaviness and aching pain in the right hypochondrium.

He fell ill 3 months ago for no apparent reason, when he noted the appearance of shortness of breath with little physical exertion. Despite ongoing outpatient treatment with diuretic, cardiac glycosides, the condition progressively worsened, and therefore was hospitalized. It was found that the patient's father and older brother died of heart failure, although they did not suffer from hypertension and coronary heart disease.

Objectively: the general condition is serious. Ortopnoe. Shortness of breath at rest with NPV 28 in 1 min. Satisfactory nutrition. The skin is pale. Acrocyanosis, mild diffuse cyanosis of the face. Swelling and pulsation of the cervical veins is noted. Severe swelling of the feet and legs.

The chest is the right shape. Percussion sound is blunted in the lower parts of the lungs. Breathing is hard, in the lower sections are sonorous, fine-bubbling rales.

The area of the heart is not externally changed. The apical impulse spilled, weakened, is determined in the V intercostal space along the front axillary line. The boundaries of relative dullness are significantly expanded in all directions: the right - 2.0 cm outward from the right parasternal line, the upper - in the II intercostal space, the left - coincides with the apical impulse. Heart sounds at the apex are muffled, II tone is accentuated on the pulmonary artery. Pathological 3 tone at the apex, soft systolic murmur here. Pulse - 104 in 1 min., Arrhythmic due to frequent (up to 10 in 1 min.) Extrasystoles, low filling and tension. HELL - 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, is denser, the edge is rounded.

Complete blood count: er. - 4.2x1012 / l, HB - 120 g / l, color - 0.9; platelets - 400x109 / l, lake. - 8.0x109 / l, pal. - 3%, eos. - 2%, seg. - 60%, lymph. - 28%, mon. - 7%, ESR - 10 mm / hour. Biochem.an. blood: AST - 0.35 mmol / L, ALT - 0.4 mmol / L, DFA - 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%.

General urine analysis: beats. weight - 1018, protein - 0.099 g / l, lake. - 2-4 p / sp., Er. - 3-5 p / sp., Hyaline cylinders.

Echocardioscopy: expansion of the cavities of the heart, a slight thickening of the posterior wall of the left ventricle and interventricular septum. Reducing the ejection fraction of the left ventricle to 40%.

Give written answers to the following questions:

1. Perform a diagnostic search.
2. Formulate a preliminary diagnosis.
3. Determine the survey plan and the need for additional research.
4. Formulate a clinical diagnosis and specify diagnostic criteria.
5. What are the indications for surgical treatment for this disease.
6. What is the optimal treatment strategy for the patient at the moment.

At the first stage of the diagnostic search, a combination of complaints characteristic of cardiomyopathy - pronounced general weakness, shortness of breath at rest mainly of an inspiratory nature, swelling of the legs, aching pain in the heart, palpitations and interruptions in the heart, severity and aching pain in the right hypochondrium make one suspect the development of patient dilated cardiomyopathy, HF II B stage.

At the second stage of the diagnostic search, examination revealed cardinal signs of this disease: cardiomegaly, percussion borders of the heart are expanded in all directions, the apical impulse is shifted left-down, spilled. During auscultation, heart sounds are muffled, systolic murmur of relative mitral and tricuspid insufficiency is heard. About stagnation in the pulmonary circulation is emphasized by the emphasis of 2 tones on the pulmonary artery. Swelling of the cervical veins, edema syndrome, hepatomegaly is detected.

At the third stage of the diagnostic search, an additional examination plan was determined: ECG, ECHO-KS, chest x-ray, general blood test, blood test for AST, ALT, DFA, CRP, total protein and protein fractions,

general urine analysis. Additional data were revealed in favor of the diagnosis of dilated cardiomyopathy - on the ECG (low voltage of the QRS complex teeth in the leads from the limbs in combination with the high amplitude of the QRS complex teeth in the chest leads, there are signs of left ventricular hypertrophy, ventricular extrasystoles. An increase in heart shadow in the radiography is determined all sides, cardiothoracic index more than 55%. Identify signs of stagnation in the lungs.
To verify the diagnosis, it is necessary to conduct ECHO-KG (transthoracic and transesophageal) to detect an increase in the size of the ventricles of the heart (the size of the left ventricle in the diastole is more than 6 cm), an increase in the atria; detecting a decrease in left ventricular contractility (ejection fraction of 40%); reducing the amplitude of the movement of the walls and their contractility, without changing their thickness; detection of mitral and tricuspid regurgitation.
The main clinical syndromes in dilated cardiomyopathy are: heart failure - both left ventricular and right ventricular; usually there is total ("congestive") heart failure; cardialgia, as well as bouts of angina pectoris (in ½ - ¼ patients). Often disturbed are heart rhythm disturbances (often - atrial fibrillation, ventricular extrasystole) and conduction (blockade of the bundle of the bundle of His); thromboembolism. Thus, the clinic of the disease is nonspecific. Patients often die either suddenly, due to rhythm disturbances, or as a result of the progression of heart failure.
Given these criteria, a diagnosis of dilated cardiomyopathy can be made.
Differential diagnosis should be carried out with Abramov-Fiedler myocarditis, diffuse infectious-allergic myocarditis, post-infarction cardiosclerosis, effusion pericarditis.
Heart transplantation is the only radical method of treatment for dilated cardiomyopathy, providing the opportunity for a full life of patients. Advances in the treatment of progressive heart failure, assisted circulation and implantation of an artificial heart made it possible to perform a heart transplant in 55–78% of patients. Moreover, the survival rate over 1 year reaches 75–85%.
Medication includes the treatment of heart failure (low-dose cardiac glycosides, ACE inhibitors, diuretics, peripheral vasodilators, beta-blockers, myocardial metabolism-improving drugs), antiarrhythmic (cordarone, ethacisine, β-blockers, potassium preparations) anticoagulant and antiplatelet therapy.

Task № 2

A 5-year-old girl showed signs of poor tolerance of her usual physical
load: pallor, lethargy, sweating. Dizziness and fainting appeared. Become
disturb pain in the heart, shortness of breath. Objectively: in the lungs breathing is carried out on all fields, no wheezing. The apical impulse is shifted to the left, reinforced, spilled. Systolic
noise is intense with a maximum along the left edge of the sternum.
ECHOCG: asymmetric hypertrophy of the left ventricle, a decrease in its cavity, dilatation of the left atrium. The thickness of the interventricular septum significantly exceeds the thickness of the wall of the left ventricle. There is a forward displacement of the cusps of the mitral valve.
1. What is your intended diagnosis?
2. Criteria for diagnosis.
3. Treatment
4. Classification of the disease.
5. Does the child have a risk of sudden cardiac death?

Task № 3

Parents of a 6-year-old girl complain about the appearance of a girl in the last two
months of restless sleep, a day of growing lethargy, weakness. Last week
note a decrease in urination. Appetite is reduced, body temperature is normal.
Pallor of the skin, puffiness of the face, the appearance of shortness of breath up to 24-26 per minute are noted. IN
lower parts of the lungs moist finely bubbling rales. Heart borders are significantly
expanded. The tones are deaf. Systolic murmur along the left edge of the sternum. Liver
increased to 3.5 cm, slightly painful. Pastosity of the legs. On the ECG: low voltage

QRS. Frequent ventricular extrasystole to the type of bigemia. On echocardiography: increase sizes of ventricles and atria. Reduced left ventricular ejection up to 37%.
1. What is your preliminary diagnosis?
2. Laboratory diagnostics.
3. The principles of treatment?
4. Forecast.
5. What are the main risk factors for the syndrome of sudden heart death?

Task № 4
A child, 5 years old, arriving by ambulance, is lethargic, apathetic, pale, restless. At examination revealed: shortness of breath up to 28, congestive wheezing in the lungs, orthopedic. At examination: cardiomegaly, displacement of the apical impulse to the left and down, expansion boundaries of relative cardiac dullness, alternating pulse, blood pressure normal. At the top systolic murmur is heard. Liver enlargement and the spleen. Swelling in the lower extremities, ascites.
1. What is your preliminary diagnosis?
2. What diseases should be used for differential diagnosis?
3. Methods of instrumental diagnostics.
4. Methods of surgical treatment of the disease.
5. Provide emergency care if pulmonary edema develops.

Task № 5
A child of 6 years old is referred to a cardiologist for a consultation, because he is worried about shortness of breath after exercise, short-term loss of consciousness. The child is hypodynamic. Past diseases - frequent acute respiratory infections, bronchitis, pneumonia in 1.5 years. The child lags behind in physical development, has a lack of body weight. Dyspnea at rest, sharply amplifies during normal physical exertion. The area of the heart is not changed. Heart sounds are sharply muffled, there is no noise. Liver +1.5 cm from under the edge of the costal arch.Clinical blood test without abnormalities. On the ECG - blockade of the left anterior leg of the bundle of His, signs of myocardial hypertrophy of both ventricles, pronounced diffuse metabolic changes.
On the echocardiography of the heart cavity is not expanded, there is a marked thickening of the anterior and posterior wall of the left ventricle, slowing down diastolic relaxation of the myocardium, borderline decrease in contractile function of the myocardium.
1. What is your diagnosis?
2. The survey plan for the differential diagnosis of syncopal conditions.
3. What will be your tactics regarding the patient?
4. Treatment.
5. The reason for the delay in physical development.

Answers on situational tasks
The standard of task number 2
1. Hypertrophic cardiomyopathy. FC III.
2. The most informative method for the diagnosis of echocardiography: asymmetric hypertrophy of the interventricular septum, symmetric left ventricular myocardial hypertrophy decrease in end-diastolic and end-systolic sizes of the left ventricle the presence of a pressure gradient in the outflow tract of the left ventricle with obstructive forms of the anterior systolic movement of the anterior cusp of the mitral valve and the average systolic covering of the cusp of the aortic valve - characteristic ultrasound signs of HCMP.

3. The basis of drug therapy is β-blockers (anaprilin, obzidan,
propranolol) 0.5 mg / kg / day in 3 divided doses, for a long time. Selective β-blockers (preferably) -atenolol 0.5 mg / kg / day in 2 divided doses, for life. Self-discontinuation of the drug can lead to sudden death.
4. Classification of hypertrophic cardiomyopathy (Leontiev IV, 2002)
I. Type of hypertrophy:
asymmetric
symmetric
II. The severity of obstructive syndrome:
obstructive form
nonobstructive form
III. Pressure gradient, degree:
-I degree - up to 30 mm
-II degree –30-60 mm
-III degree over 60 mm
IV. Clinical Stage:
-compensation
-subcompensation
-decompensation
5 . HCMP is a risk factor for sudden cardiac death.

The standard of task №3
1. Dilated cardiomyopathy. LDC: ventricular extrasystole by type
bigemia. NK IIB Art. FC III.
2. Laboratory diagnostics:
-wedge.an.blood - without pathology
-biochemical an. blood (Na, K, urea, creatinine, ALT, AST, fibrinogen, bilirubin) - reflect severe hemodynamic disturbances
immunological studies
–Antimiosin antibodies to myosin heavy chains, antimitochondrial antibodies, antibodies to – adrenoreceptors
–Markers of DCMP
-level KFK and KFK
-MV to rule out myocarditis
-level of iron and transferrin
3. Treatment of congestive heart failure:
-cardiac glycosides (digoxin in a maintenance dose of -0.01 mg / kg in 2 divided doses),
-diuretics: furosemide 0.5 mg / kg / day.in combination with veroshpiron.
ACE inhibitors: capoten 0.5 mg / kg / day. in three doses (under the control of blood pressure).
β-blockers: metoprolol 5 mg / day. in two steps.
-cardiotrophicanabolics: Mexidol, Elkar, Kudesan.
4. Adverse. Despite intensive treatment and the search for new drugs
venous
means for the treatment of DCMP, the issue of heart transplantation remains relevant.
5. Risk factors for sudden cardiac death: young age, cases of sudden
cardiac death in the family, the development of a patient with paroxysms of ventricular tachycardia.

The standard of task №4
1. Dilated cardiomyopathy. CH III art., FC IV.
2. Differential diagnosis: myocarditis, non-rheumatic carditis, infectious endocarditis, CHD.

3. ECG, echocardiography, chest x-ray, radionuclide methods, puncture biopsy (not used in our country because of the invasive nature, the risk of complications and high cost).
4. The types of surgical treatment of heart failure include:
-resynchronization therapy EX
reconstructive surgery on the left ventricle
-use of devices that reduce the size and shape of the cavity of the left
ventricle
-Mechanical circulatory support devices
heart transplantation
5. In the case of pulmonary edema:
a) the position of the child with an elevated head end.
b) to ensure patency of the upper respiratory tract (remove mucus by electric suction,
pear).
c) inhalation of moistened oxygen 70%, passed through 33% alcohol for 15
-20 minutes.
g) Lasix solution 1% -1-2 mg / kg iv for administration 1-2 times a day
d) a solution of prednisolone 3% -1-3 mg / kg iv in a jet.
e) a solution of seduxen 0.5% -0.7 ml / m.
g) with persistent low cardiac output
–Dobutamine (in the intensive care unit) titrated to 60 mcg / min (5 mcg / kg / min)
saline solution.
h) after stopping pulmonary edema and stabilizing hemodynamics, cardiac glycosides in
saturation dose (0.05 mg / kg, divided into three injections: ½ dose, after 8-12 hours - ¼ and after 8-12 hours - the last ¼).
i) in the absence of effect and the threat of cardiac arrest - IVL.216

The standard of task №5
1. Diagnosis: Hypertrophic cardiomyopathy, non-obstructive form. CH IIA.
Syncope.
2. Examination for the differential diagnosis of syncope:
a) anamnesis of life, information about past illnesses, injuries taken
medicines;
b) complaints in the interictal period;
c) data on how long and how often fainting is repeated;
d) factors provoking fainting;
d) features of the syncopal state:
- the presence, manifestations and duration of a fainting state;
Symptoms during syncope (color and moisture of the skin, frequency and nature
respiration and pulse, convulsive syndrome);
Duration of fainting
- the presence, manifestations and duration of the fainting state.
e) physical examination with an emphasis on detecting cardio
-vascular diseases (heart sizes, cardiac and vascular murmurs,
Blood pressure, pulse rate and regularity, difference in the filling of the pulse on both sides of the radial and carotid arteries, signs of heart failure, etc.).
g) ECG analysis (if possible, assessment of previous ECGs),
h) Holter monitoring.
i) examination by a neurologist.
3. Conducting differential diagnosis of the causes of syncope.
When confirming the cardiogenic nature of syncopal conditions and identifying

cardiopulmonary implantation of a patient with life-threatening arrhythmias defibrillator.
4. Supportive therapy is indicated.
-adrenergic blockers, capotene, veroshpiron.
5. The presence of organic damage to the heart, accompanied by symptoms of cardiac insufficiency leads to somatogenically caused retardation of physical development.

1. Theme №12 Sudden coronary death
2. Purpose: To get acquainted with the syndromes of heart failure, to study the epidemiology, etiology and pathogenesis of sudden coronary death, emergency care. Mastering the algorithm for making a preliminary diagnosis, drawing up a plan for further examination with the participation of other specialists to provide emergency care for sudden coronary death.
3. Tasks:
1.Select literature on the topic of the lesson.
2. Make a presentation and visual material.
3. Compose 4-5 test tasks / 1-2 situational tasks on the topic of the lesson.
4.Form / Evaluation Form: Presentation
verification is carried out during the SRSP.
5. Criteria for the implementation of the CDS (requirements for the assignment): indicated in the syllabus.
6. Delivery time: 12 day
7. Literature: indicated in the syllabus.
8. Control (questions, tests, tasks, etc.).
Task 1
In one of the universities, students held cross-country competitions. Supervision was provided by medical personnel equipped with an emergency first-aid kit and an autonomous external defibrillator. One of the students at the age of 20 after the finish felt bad. After 1 min, he fell in front of medical personnel.
Inspection: consciousness is absent, skin is pale, pulse and blood pressure are not determined, respiration is absent.
1. What is the most likely cause of clinical death?
2. What is the treatment tactic?

Task 2
A 57-year-old patient was undergoing treatment at the cardiology department of the city hospital. Diagnosis: hypertension of the II stage, arterial hypertension of the 2nd degree. Ischemic heart disease.Angina pectoris II functional class. Heart failure stage I. (NYHA I FC). Obesity I degree.Dyslipidemia.Risk 2 (moderate).Received for the correction of antihypertensive treatment. During the stay in the hospital, an adequate antihypertensive treatment was selected, consisting of a combination of ACE inhibitors, p-adrenergic blockers, diuretic drugs. Blood pressure stabilized - 130/80 mm Hg The condition is stable. The patient is prepared for discharge. On the eve of his discharge, a roommate found him lying unconscious on the floor. The neighbor was absent in the room for about 8-10 minutes. Inspection: consciousness is absent, the skin is pale, pulse, blood pressure and respiration are absent.
1. What is the most likely cause of clinical death?
2. What is the treatment tactic?

Task 3
The patient is 60 years old. It was observed in the clinic at the place of residence. Diagnosis: ischemic heart disease. Angina pectoris I functional class. Heart failure stage I (NYHA I FC). Obesity II degree.

I turned to a neurologist at the clinic. Complaints of aching pain in the lumbar spine, extending to the lower extremities, a feeling of heaviness in the legs in the evening. The pain arose three days ago after intensive work in the country and lifting weights. It was treated by applying an ointment with NSAIDs to the lumbar region without effect.
10 years ago, the patient was operated on for varicose veins of the lower extremities. Repeatedly stayed in a hospital about thrombophlebitis of deep veins of the lower extremities.Last hospitalization 2 years ago. Take 75 mg aspirin daily. Neurologist diagnosed lumbalgia. NSAIDs are prescribed inside, back and lower limb massage. 5 minutes after a session of massage of the back and lower extremities, the patient fell out of the clinic.
Inspection: no consciousness, severe cyanosis of the skin of the face and upper half of the body; pulse, blood pressure and respiration are absent.
1. What is the most likely cause of clinical death of the patient?
2. What mistakes did the neurologist make when prescribing treatment?
3. What group of drugs should be used in this category of patients in addition to basic cardiopulmonary resuscitation?

1.Milestone control №2
2. Goal: the main goal is to check the level of assimilation of the next section of the subject.
3.Quests:
• Testing
• Control of the acquisition of practical skills
• Protection of medical history
4. Form of performance / assessment:
• Testing
• Control of the acquisition of practical skills
• Protection of medical history
5. **Criteria for the implementation of the CDS (requirements for the assignment):** indicated in the syllabus.
6. Delivery time: 12 day
7. Literature: indicated in the syllabus.
8. Control (questions, tests, tasks, etc.):
Cross-Border Issues 2
Tasks of the midterm control 2 (test tasks indicated in the midterm control 2)

1. Theme №13. Thromboembolism of the pulmonary artery (PTE)
2. Purpose: To get acquainted with the syndromes of thromboembolism of the pulmonary artery (PTE), to study the epidemiology, etiology and pathogenesis of thromboembolism of the pulmonary artery (PTE), emergency care. Mastering the algorithm for making a preliminary diagnosis, drawing up a plan for further examination with the participation of other specialists to provide emergency care for thromboembolism of the pulmonary artery (PTE).
3. Tasks:
1. Select literature on the topic of the lesson.
2. Make a presentation and visual material.
3. Compose 4-5 test tasks / 1-2 situational tasks on the topic of the lesson.
4.Form / Evaluation Form: Presentation
verification is carried out during the SRSP.
5. Criteria for the implementation of the CDS (requirements for the assignment): indicated in the syllabus.
6. Delivery time: 12 day

7. Literature: indicated in the syllabus.
8. Control (questions, tests, tasks, etc.).

TASK №1
Patient M., 45 years old, in the midst of complete health, felt, while tying his shoelaces, an acute pain behind the sternum, cold, sticky sweat, suffocation, cough, a feeling of fear of death. She has a history of varicose veins. Objectively: a serious condition, sharply increased nutrition (body weight - 120 kg, Quetelet index - 34 kg/m2) orthopnea, swelling of the cervical veins. The skin is clean, cold, moist, bluish-purple. In the lungs, breathing is weakened, in the lower sections there are many moist rales. CHD-30 per minute. The heart sounds are significantly muffled, the accent of the II tone is over the pulmonary artery. The pulse corresponds to the heart rate - 130 per minute, gallop rhythm. BP - 75/40 mm Hg. Tongue dry, slightly coated with white coating. The liver does not protrude from under the edge of the costal arch. There are many varicose veins on the legs. On the ECG, sinus rhythm with a heart rate of 130 per minute, a deep S wave in I, a deep Q III wave in lead.

QUESTIONS:
1. What is your proposed diagnosis?
2. Carry out differential diagnostics.
3. What can be seen on a plain chest x-ray?
4. Start anticoagulant therapy.

ANSWERS:
1. Thromboembolism of the pulmonary artery.
2. AMI, exfoliating aortic aneurysm, spontaneous pneumothorax.
3. Wedge-shaped shadow of a lung infarction, increased lung pattern.
4. Thrombolytics (streptokinase 1500000 IU intravenously drip for 20-30 minutes, 100 mg tissue plasminogen activator intravenously drip in isotonic sodium chloride solution, urokinase - 300000 IU for 15-30 minutes, and then intravenously drip by 250000
IU for 12 hours.) Direct anticoagulants: heparin (if streptokinase was not administered) - 10,000 IU intravenously, then 1000 U / hour intravenously by drip until the initial APTT doubled, then subcutaneously 2.5 thousand - 5 thousand units 6 times a day under the control of APTT and PTI. Heparin prophylaxis - 2.5 thousand units subcutaneously 4 times a day or low molecular weight heparins (fraxiparin - 3000-6000 international anti-Xa units 1 time per day), aspirin 0.25 g orally.

TASK №2
Patient A., 35-year-old woman in labor M., in the postpartum period, developed severe pain in the chest, severe shortness of breath of a mixed nature, lost consciousness.

Objectively: the general condition is severe, cyanosis of the face is noted. NPV up to 30 in 1 minute. During auscultation, breathing in the right half of the chest is sharply weakened, single dry rales, in the lower sections there are inaudible fine bubbling rales. The cervical veins are swollen, the pulse is rhythmic 100 per 1 minute. BP - 100/60 mm Hg. Art. Heart tones are muffled, splitting of the second tone over the pulmonary artery. The abdomen is soft and painless.
In the UAC: er. - 4.5x1012 / l, Hb - 135 g / l, ESR - 15 mm / h, leukocytes - 9.5x1012 / l, n - 2%, s - 65%, e - 2%, m - 10%, l - 21%, b / c - protein - 80 g / l, albumins - 42%, alpha-1 - 8%, alpha-2 - 12%, beta - 18%, gamma - 20%, PTI - 105%, time coagulation - 4 min., LDH - 4.2 μmol / h / l, LDH-1 - 25%, LDH-2 - 26%, LDH-3 - 30%, LDH-4 - 8%, LDH-5 - 11 %.
In OAM: straw-yellow color, acid reaction, beats. weight - 1016, leukocytes - 1-2 in p / sp., ep. cells - 1-2 in p / sp.
ECG

QUESTIONS:
1. Establish a preliminary diagnosis.
2. Make a plan for an additional examination.
3. Carry out differential diagnostics.
4. Determine the tactics of treatment.

ANSWERS:
1. Preliminary diagnosis: pulmonary embolism.
2. Complete blood count, determination of the activity of CPK, LDH isoenzymes, determination of the blood coagulation and anticoagulation system, plain chest radiography, echocardiography.
3. It is necessary to conduct a differential diagnosis with: an attack of angina pectoris, myocardial infarction, dissecting aortic aneurysm, pleurisy, pneumothorax.
4. Combat shock, treat heart failure. Relief of pain syndrome. Fibrinolytic and anticoagulant therapy.