

MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION
VOLGOGRAD STATE UNIVERSITY MEDICAL UNIVERSITY

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Introduction.

The methodological recommendations are intended for 4th year students of the Faculty of Medicine undergoing Industrial practice:

practice of a therapeutic profile.

This practice is part of the specialty program 05/31/01 medical business and was developed in accordance with the requirements of the Federal State Educational Standard for Higher Education – specialty 31.05.01 Medical business.

The student should know:

- basic concepts in the field of medicine;
- the procedure for collecting, storing, searching, processing, converting, and distributing information about diseases of internal organs;
- Fundamentals of medical ethics and deontology;
- topographic anatomy, etiology and pathogenesis and clinical picture, methods of diagnosis of the most common diseases; medical devices provided for in the order of medical care; age, gender and ethnic characteristics of the course of pathological processes; conditions requiring urgent medical care;
- a methodology for collecting anamnesis of life and diseases, complaints from children and adults (their legal representatives);
- methods of examination and physical examination (examination, palpation, percussion, auscultation); methods of laboratory and instrumental studies to assess the state of health, medical indications for conducting research, rules for interpreting their results;
- algorithm of diagnosis, principles of differential diagnosis, international statistical classification of diseases and health-related problems (ICD);
- general biological patterns, fundamentals of heredity and variability, anatomy, histology, embryology, topographic anatomy, physiology, pathological anatomy and physiology of human organs and systems.
- principles and methods of providing medical care to patients in emergency situations, in emergency situations, epidemics and in foci of mass destruction in

accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care;

- Clinical signs of major emergency conditions;
- methods of drug and non-drug treatment, medical indications for the use of medical devices for the most common diseases;
- groups of medicines used to provide medical care in the treatment of the most common diseases; the mechanism of their action, medical indications and contraindications to the appointment; compatibility, possible complications, side effects, adverse reactions, including serious and unforeseen;
- features of medical care in emergency situations;
- capabilities of reference information systems and professional databases;
- methods of information retrieval, information and communication technologies;
- modern medical and biological terminology;
- Principles of evidence-based and personalized medicine;
- a list of laboratory and instrumental research methods for assessing the patient's condition, the main medical indications for conducting research and interpreting the results;
- etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, features of the course, complications and outcomes of diseases of internal organs;
- clinical signs of sudden cessation of blood circulation and/or respiration;
- rules of basic cardiopulmonary resuscitation;
- principles of operation of devices for external electrical pulse therapy (defibrillation);
- rules for performing external electrical pulse therapy (defibrillation) in case of sudden cessation of blood circulation and/or respiration.
- procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, standards of medical care;
- methods of laboratory and instrumental research to assess the state of health, medical indications for conducting research, rules for interpreting their results;

- etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, features of the course, complications and outcomes of diseases of internal organs;
- modern methods of using medicines, medical devices and therapeutic nutrition for diseases and conditions of the patient in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care;
- the mechanism of action of medicines, medical devices and therapeutic nutrition, medical indications and contraindications to their use; complications caused by their use;
- modern methods of non-drug treatment of diseases and conditions in the patient in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care;
- the mechanism of action of non-drug treatment; medical indications and contraindications to its use; side effects, complications caused by its use.

The student must be able to:

- use educational, scientific, popular science literature, the Internet for professional activities;
- apply ethical standards and principles of conduct of a medical professional in the performance of their professional duties;
- apply the rules and norms of the doctor's interaction with colleagues and patients (their legal representatives).
- collect complaints, anamnesis of life and disease in children and adults (their legal representatives), identify risk factors and causes of disease development; apply methods of examination and physical examination of children and adults; carry out cancer screening;
- interpret the results of the examination and physical examination of children and adults; formulate a preliminary diagnosis, make a plan for laboratory, instrumental and additional studies in children and adults, in accordance with the procedures for

providing medical care, clinical recommendations, taking into account the standards of medical care; use medical devices provided for by the procedure for providing medical care;

- send children and adults for laboratory, instrumental and additional studies, consultations with specialist doctors in accordance with current medical care procedures, clinical recommendations, taking into account medical care standards;
- interpret and analyze the results of basic (clinical) and additional (laboratory, instrumental) examination methods; carry out differential diagnosis of diseases in children and adults; identify clinical signs of sudden acute diseases, conditions, exacerbations of chronic diseases without obvious signs of life-threatening, requiring urgent medical care.
- to evaluate the main morphofunctional data, physiological conditions and pathological processes in the human body.
- recognize conditions that require emergency medical care, including in emergency situations, epidemics and in centers of mass destruction;
- perform basic cardiopulmonary resuscitation, defibrillation;
- use medicines and medical devices when providing medical care in case of emergency; use personal protective equipment.
- determine the scope and sequence of proposed measures for the treatment of children and adults with the most common diseases in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care;
- monitor the effectiveness and safety of non-medicinal and medicinal treatment methods, prevent or eliminate complications, side effects, undesirable reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of medicines and (or) medical devices, non-medicinal treatment;
- adjust treatment tactics based on the information received about the state of health and the effectiveness of treatment.
- to carry out an effective search for information necessary to solve the tasks of professional activity using reference systems and professional databases;

- use modern medical and biological terminology to identify clinical signs of conditions requiring urgent medical care;
- carry out emergency medical care measures;
- identify conditions requiring emergency medical care, including clinical signs of sudden cessation of blood circulation and respiration;
- perform basic cardiopulmonary resuscitation in combination with electro-pulse therapy (defibrillation).
- collect complaints, anamnesis of the patient's life and illness and analyze the information received;
- perform a complete physical examination of the patient (examination, palpation, percussion, auscultation) and interpret its results;
- substantiate the need and scope of laboratory examination of the patient;
- substantiate the need and scope of an instrumental examination of the patient;
- justify the need to refer the patient for consultations with specialist doctors;
- analyze the results of the patient's examination, if necessary, justify and plan the scope of additional studies;
- interpret the results of collecting information about the patient's disease;
- interpret the data obtained during the laboratory examination of the patient;
- interpret the data obtained during the instrumental examination of the patient;
- interpret the data obtained during the consultations of the patient by specialist doctors;
- to carry out differential diagnosis of diseases of internal organs from other diseases;
- determine medical indications for the provision of emergency, including emergency specialized, medical care;
- use medical devices in accordance with current medical procedures, clinical recommendations (treatment protocols) on the provision of medical care, care taking into account the standards of medical care.
- draw up a treatment plan for the disease and the patient's condition, taking into account the diagnosis, the patient's age, the clinical picture of the disease in accordance with current medical care procedures, clinical recommendations

(treatment protocols) on the provision of medical care, taking into account the standards of medical care;

- prescribe medicines, medical devices and therapeutic nutrition, taking into account the diagnosis, age and clinical picture of the disease in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standard.

I. The purpose of the practice: to familiarize 4th year students of the Faculty of Medicine with the main stages of a doctor's work in a therapeutic hospital; to develop basic skills in providing therapeutic and preventive care to the population in a

therapeutic hospital; to master the skills of providing emergency and emergency medical care to patients with therapeutic pathology at the hospital stage.

II. Objectives of the practice:

- consolidation of students' knowledge about the basic principles of the organization of medical and preventive care in a hospital setting;
- familiarization of students with the specifics of the organization and scope of work of a hospital doctor, with modern diagnostic capabilities of hospital clinical diagnostic services and training in their rational use;
- mastering the main stages of therapeutic and diagnostic work at the patient's bedside in the process of independent medical activity;
- development of students' clinical thinking skills in the diagnosis of the most common therapeutic diseases in hospital settings, assessment of severity, features of course and treatment;
- psychological preparation of students for their future profession.
- teaching students to independently prepare medical documentation for a hospital doctor.

III. Expected results (competencies).

During the internship, the student should have the following competencies:

№	Code	The text of the competence
1	UK1.	He is able to carry out a critical analysis of problematic situations based on a systematic approach, develop a strategy for action
2	OPK-1.	He is able to implement moral and legal norms, ethical and deontological principles in his professional activity
3	OPK-4.	He is able to use medical devices provided for in the order of medical care, as well as to conduct examinations of the patient in order to establish a diagnosis.
4	OPK-5.	He is able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems.
5	OPK-6.	He is able to organize patient care, provide primary health care, ensure the organization of work and professional decision-making in case of urgent conditions at the pre-hospital stage, in emergency situations, epidemics and in foci of mass destruction.
6	OPK-7.	He is able to prescribe treatment and monitor its effectiveness and safety.
7	OPK-10.	He is able to understand the principles of modern information technologies and use them to solve professional tasks
8	PC-1.	It is able to recognize and provide medical care in emergency or urgent forms in conditions that pose a threat to the patient's life, including conditions of clinical death (stopping vital functions of the human body (blood circulation and/or respiration).
9	PC-2.	He is able to conduct an examination of the patient in the presence of medical indications in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care
10	PC-3.	He is able to prescribe medication and non-drug treatment, taking into account the diagnosis, age and clinical picture of the disease in accordance with current medical care procedures, clinical recommendations (treatment protocols)

(Goals, objectives and expected results are presented in Appendix 1 Individual Assignment).

IV. The place of practice.

The practice is conducted in third-party organizations - in therapeutic hospitals at the clinical bases of VolgSMU, which have the necessary personnel and scientific and

technical potential, the main activity of which determines the availability of facilities and types of professional activity of graduates in the field of training in the specialty of "Medical business". The practical training is carried out under the direct supervision of the staff of the department.

Industrial practice: The practice of the therapeutic profile is carried out at the following clinical bases:

1. GUZ "Clinical hospital of emergency medical care No. 7".
2. GUZ "Clinical hospital No. 4".
3. GUZ "Clinical hospital No. 12".
4. GUZ "Clinical hospital No. 11".

V. The content of the practice.

Module 1. Organization of inpatient therapeutic services.

Introduction to practice. Responsibilities and basic documentation of a hospital internist.

Module 2. Research methods in the therapeutic department.

Patients with diseases of the cardiovascular system.

Patients with respiratory diseases.

Patients with diseases of the gastrointestinal tract.

Patients with diseases of the hematopoiesis system.

Patients with kidney diseases.

Module 3. Emergency and emergency medical care in therapy.

Diseases of the cardiovascular system.

Respiratory diseases.

Diseases of the gastrointestinal tract.

Kidney diseases.

Help with allergic reactions.

Module 4. Manipulations performed during emergency care.

Table 1. The content of the production practice: The practice of the therapeutic profile.

No.	Thematic blocks ¹	Hours (academic)
1.	Organization of inpatient therapeutic services.1 Introduction to practice. Familiarization with the purpose and objectives of the practice. Organization of the therapeutic department of the hospital (staff, equipment).	3
	The formation of an individual task.	6
2.	Responsibilities and basic documentation of a hospital internist. Indications for hospitalization of therapeutic patients (emergency and planned hospitalization); ethical and deontological aspects in the work of the attending physician; compliance with safety regulations, filling out medical documentation (medical history, discharge from the hospital).	3
	Performing an individual task.	6
3.	Research methods in the therapeutic department.1 Patients with diseases of the cardiovascular system. Drawing up a patient examination plan for acute myocardial infarction, mitral heart defects, aortic heart defects, infectious endocarditis, acute rheumatic fever, arrhythmias and heart blockades. Changes in the data of percussion and auscultation of the heart in aortic heart defects. Changes in the data of percussion and auscultation of the heart in mitral heart defects. The method of registration and the structure of a normal ECG.	3
	Performing an individual task.	6
4.	Research methods in the therapeutic department.1 Patients with diseases of the cardiovascular system. The method of registration and the structure of a normal ECG. The methodology of conducting and evaluating the bicycle ergometry test. Definition and ECG are signs of acute coronary syndrome. ECG signs of Q-positive and Q-negative myocardial infarction, indications for thrombolytic therapy. ECG changes in aortic malformations and mitral malformations. The methodology, indications, diagnostic criteria of daily ECG monitoring. Methods, indications, diagnostic criteria of transthoracic echocardiography, transesophageal, stress echocardiography, stress	3

	<p>tests.</p> <p>The method of measuring blood pressure. Interpretation of blood pressure indicators in various pathological conditions. Indications, SMAD methodology, evaluation criteria dipper, non dipper, over dipper.</p> <p>Laboratory criteria for the activity of the rheumatic process.</p> <p>Assessment of lipid metabolism parameters and the nature of changes in lipid fractions in atherosclerosis and coronary heart disease, targeted</p>	
	Performing an individual task.	6
5.	<p>Patients with respiratory diseases.</p> <p>Drawing up a patient examination plan for pneumonia, COPD and bronchial asthma.</p> <p>Changes in auscultation data, lung percussion and instrumental parameters in pneumonia, COPD and bronchial asthma.</p> <p>The study of the function of external respiration. The main indicators of the spirogram. Evaluation of the results of the study of the function of external respiration (BDD, OFV1, maximum exhalation rate, VEL, functional tests). The concept of variability of peak exhalation rate. The methodology of conducting and evaluating the results of peak fluometry in pathology of the bronchopulmonary system (COPD, BA).</p>	3
	Performing an individual task.	6
6.	<p>Patients with respiratory diseases. The technique of pleural puncture. Evaluation of the results of the pleural fluid examination. Evaluation of the general and bacteriological analysis of sputum in various diseases of the bronchopulmonary system. Preparation of patients for chest X-ray. Radiological signs of pneumonia, COPD, bronchial asthma.</p>	3
	Performing an individual task.	6
7.	<p>Patients with diseases of the gastrointestinal tract.</p> <p>Drawing up a patient examination plan for liver pathology.</p> <p>Laboratory criteria for cytolysis syndrome, mesenchymal inflammatory syndrome, hepatic cell insufficiency. Laboratory criteria for cholestasis syndrome. Laboratory criteria for parenchymal and mechanical jaundice.</p> <p>Drawing up a patient examination plan for pathology of the stomach and duodenum.</p> <p>Methods of conducting and evaluating the results of gastric pH-metry (criteria for hypo- and hypersecretory disorders). Methods of HP detection, indications, diagnostic criteria. The principles of the method of surgical examination of the esophagus, stomach,</p>	3

	<p>duodenum 12, patient preparation, indications, contraindications.</p> <p>The principle of the FGDS method, diagnostic capabilities, rules of preparation, indications and contraindications for implementation.</p> <p>Preparation of patients for rectoromanoscopy and fibrocolonoscopy diagnostic capabilities, rules of preparation, indications and contraindications for implementation.</p> <p>Preparation of patients for radiography of abdominal organs diagnostic capabilities, rules of preparation, indications and contraindications for implementation.</p> <p>Preparation of patients for ultrasound examination of abdominal organs diagnostic capabilities, rules of preparation, indications for implementation.</p>	
	Performing an individual task.	6
8.	<p>Patients with diseases of the hematopoiesis system. Drawing up a patient examination plan for blood diseases. Assessment of the total blood count for iron deficiency anemia, vitamin B12 deficiency anemia, hemolytic anemia and aplastic anemia.</p> <p>Assessment of the total blood count in acute and chronic myeloid leukemia, chronic lymphocytic leukemia. The methodology of conducting and evaluating the results of sternal puncture. Blood transfusion technique, indications, adverse reactions.</p>	3
	Performing an individual task.	6
9.	<p>Patients with kidney diseases.</p> <p>Drawing up an examination plan for a patient with kidney disease.</p> <p>Preparation of patients for ultrasound examination of pelvic organs diagnostic capabilities, rules of preparation, indications for implementation.</p> <p>The methodology for evaluating the general urine analysis, according to Nechiporenko, Zimnitsky and the Rehberg sample, calculation of the glomerular filtration rate according to the Cockcroft-Gault formulas, SKD-EPI.</p> <p>Evaluation of tests in a patient with chronic diffuse glomerulonephritis and CRF. Evaluation of analyses of the renal complex (total protein, protein fractions, cholesterol, urea, residual nitrogen, filtration rate and reabsorption of urine) in a patient with acute and chronic diffuse glomerulonephritis.</p>	3
	Performing an individual task.	6
10.	<p>Emergency and emergency medical care in therapy.1</p> <p>Diseases of the cardiovascular system.</p> <p>Emergency care: for cardiogenic shock,</p>	3

	<p>for a patient with uncomplicated hypertensive crisis, for a cerebral form of hypertensive crisis, for a patient with a hypertensive crisis complicated by acute left ventricular failure, for a patient with pulmonary edema against the background of acute myocardial infarction, emergency care for status anginosus (myocardial infarction), relief of pain syndrome, pericarditis, myocarditis, with paroxysmal tachycardia: with paroxysmal supraventricular tachycardia, with ventricular tachycardia, in a patient with arrhythmic collapse, with paroxysm of atrial fibrillation, with an attack of cardiac asthma, with delaminating aortic aneurysm, with atrioventricular block, Morgagni-Adams-Stokes syndrome, with clinical death, asystole and fibrillation ventricles, in syncopal conditions, in acute right ventricular insufficiency, with PE. Terminal conditions, diagnostic signs; precursors of asystole, symptoms, emergency care; ventricular fibrillation (precursors, symptoms, emergency care); respiratory arrest, diagnostic signs, emergency care; diagnostic signs of clinical death of the patient, emergency care; the recovery period after clinical death.</p>	
	Performing an individual task.	6
11.	<p>Emergency and emergency medical care in therapy.1 Respiratory diseases. Emergency care: for infectious and toxic shock, with an attack of bronchial asthma, with status asthmaticus (asthmatic status), with spontaneous pneumothorax, for a patient with hemoptysis and pulmonary bleeding, with acute respiratory distress syndrome, with hyperthermia, with violations of tracheobronchial patency, indications and methods of oxygen therapy.</p>	3
	Performing an individual task.	6
12.	<p>Emergency and emergency medical care in therapy.1 Diseases of the gastrointestinal tract. Emergency care: for gastric bleeding,</p>	3

	for hepatic coma, for hypovolemic shock.	
	Performing an individual task.	6
13.	Emergency and emergency medical care in therapy.1 Kidney disease.2 Emergency care: for uremic coma, complications of acute diffuse glomerulonephritis, eclampsia, convulsive syndrome.	3
	Performing an individual task.	6
14.	Emergency and emergency medical care in therapy.1 For allergic reactions. Emergency care: for angioedema of Quincke, urticaria, anaphylactic shock.	3
	Performing an individual task.	6
15.	Manipulations performed during the provision of emergency care.1 Technique of indirect heart massage. Indications and methods of electropulse defibrillation of the heart. Injections (subcutaneous, intramuscular, intravenous); filling the system for intravenous injections. Pulse oximetry, interpretation of the results. Catheterization of the bladder with a catheter. Gastric lavage with a thick and thin probe. Setting up a cleansing, siphon enema, and a gas outlet tube. Performing artificial lung ventilation in various ways (mouth-to- mouth, mouth-to-nose, respirator, AMBU bag). Carrying out oxygen therapy by various methods (oxygen from the pillow, oxygen installation, oxygen supply through a defoamer). Sputum aspiration (with rubber and plastic catheters through the mouth, nose, air ducts, intubation and tracheotomy tubes).	3
	Performing an individual task.	6
16.	Educational and practical conference based on the results of the practice. Presentation of accounting documentation on the practice. Intermediate certification.	3
	Placement of accounting documentation on practice in the electronic information and educational environment of VolgSMU.	3
17.	Total	144

1 – one thematic block includes several classes conducted in the form of practical training, the duration of one lesson is 45 minutes with a break between classes of at least 5 minutes, the duration of one thematic block is 1 day.

VI. Assessment tools (fund of assessment tools) for monitoring the level of competence formation

6.1. Evaluation tools for conducting current and interim practice certification

The current certification includes the following types of tasks: testing, interview on control issues, assessment of the development of practical skills.

The intermediate certification in practice includes the following types of tasks: interview on control issues, assessment of the development of practical skills, preparation of a report on a clinical case.

6.1.1. The list of control questions for the interview:

1. Algorithm of diagnosis and emergency care for cardiogenic shock.
2. Algorithm of diagnosis and emergency care for a patient with pulmonary edema on the background of acute myocardial infarction.
3. Emergency care for infectious and toxic shock.
4. Emergency care for status anginosus (myocardial infarction), relief of pain syndrome.
5. Emergency care for status asthmaticus (asthmatic status).
6. Emergency care for allergic reactions: angioedema of Quincke, urticaria.
7. Emergency care for anaphylactic shock.
8. Indications and methods of oxygen therapy.
9. Differential diagnosis of rhythm disturbances and emergency care for paroxysmal tachycardia.
10. Algorithm of diagnosis and emergency care in hypertensive crisis.
11. Emergency care for the cerebral form of hypertensive crisis.
12. Providing emergency care to a patient with a hypertensive crisis complicated by acute left ventricular failure.

13. Emergency care for paroxysmal supraventricular tachycardia.
14. Algorithm of diagnosis and emergency care for ventricular tachycardia.
15. Algorithm of diagnosis and emergency care in case of an attack of cardiac asthma.
16. Algorithm of diagnosis and emergency care for a patient with arrhythmic shock.
17. An algorithm for diagnosing and providing emergency care to a patient with hemoptysis.
18. Differential diagnosis and emergency care for acute dyspeptic syndrome.
19. Emergency care for atrial fibrillation paroxysm.
20. Tactics of patient management in case of suspected delaminating aortic aneurysm.
21. Emergency care for atrioventricular block, Morgagni-Adams-Stokes syndrome.
22. Differential diagnosis and emergency care in acute renal failure.
23. Differential diagnosis and emergency care for pericarditis.
24. Emergency care in case of clinical death, asystole and ventricular fibrillation.
25. Algorithm of diagnosis and emergency care for liver failure.
26. Diagnosis of complications of acute diffuse glomerulonephritis and emergency care.
27. Emergency care in case of an attack of bronchial asthma.
28. Emergency care for eclampsia.
29. Algorithm of diagnosis and emergency care in syncopal conditions.
30. Differential diagnosis and emergency care for myocarditis.
31. Emergency care for PE.
32. Emergency care for respiratory distress syndrome.
33. Emergency care for hypovolemic shock.
34. Emergency care for febrile syndrome.
35. Emergency care for convulsive syndrome.
36. Emergency care for violations of tracheobronchial patency.

6.1.2. Interpretation of paraclinical research data.

1. The method of registration and parameters of a normal ECG.

2. The method of measuring blood pressure. Interpretation of blood pressure indicators in various pathological conditions.
3. Laboratory criteria for hepatic cell insufficiency.
4. Study of the function of external respiration. The main indicators of the spirogram (OFV1, maximum exhalation rate, VEL, functional tests).
5. The technique of pleural puncture. Evaluation of the results of a pleural fluid examination.
6. The technique of indirect heart massage.
7. Laboratory criteria for cholestasis syndrome.
8. Methods of conducting and evaluating stress tests (bicycle ergometry, treadmill test).
9. Laboratory and ECG signs of acute coronary syndrome.
10. The methodology for evaluating the general urine analysis, according to Nechiporenko, Zimnitsky and the Rehberg sample, calculation of the glomerular filtration rate according to the Cockcroft-Gault formulas, SKD-EPI.
11. The concept of variability of peak exhalation rate. Methods of conducting and evaluating the results of peak fluometry in pathology of the bronchopulmonary system (COPD, BA).
12. Laboratory methods of differential diagnosis of chronic hepatitis.
13. Laboratory methods for the diagnosis of acute rheumatic fever.
14. Laboratory and instrumental methods of diagnosis of bronchial asthma.
15. Clinical and instrumental signs of pneumonia.
16. Clinical and instrumental signs of lung abscess.
17. Assessment of lipid metabolism parameters and the nature of changes in lipid fractions in atherosclerosis and coronary heart disease, target values.
18. Indications and methods of electropulse therapy.
19. Laboratory methods for the diagnosis of chronic diffuse glomerulonephritis and CRF.
20. Laboratory methods for the diagnosis of chronic iron deficiency anemia.
21. Laboratory criteria for the diagnosis of acute and chronic myeloid leukemia.

22. Laboratory criteria for the diagnosis of acute and chronic lymphocytic leukemia.
23. Diagnostic criteria for acute myocardial infarction.
24. Clinical and instrumental signs of mitral stenosis.
25. Clinical and instrumental signs of mitral insufficiency.
26. Clinical and instrumental signs of aortic stenosis.
27. Clinical and instrumental signs of aortic insufficiency.
28. Methods of conducting and evaluating the results of sternal puncture.
29. Methods of conducting and evaluating the results of gastric pH-metric probing (criteria for hypo- and hypersecretory disorders).
30. Laboratory criteria for parenchymal and mechanical jaundice.
31. Laboratory diagnosis of nephrotic syndrome and renal insufficiency.
32. Indications for hemotransfusion, methods of hemotransfusion, complications.
33. Principles of the method of surgical examination of the esophagus, stomach, duodenum 12, diagnostic capabilities, patient preparation, indications, contraindications.
34. Principles of the FGDS method, diagnostic capabilities, rules of preparation, indications and contraindications for implementation.
35. Indications and methods of daily ECG monitoring, interpretation of the results.
36. Indications and methods of daily blood pressure monitoring (SMAD), interpretation of the results.

6.1.3. Examples of the topics of the reports:

1. A clinical case of a patient with a disease of the cardiovascular system. Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, treatment. Features of ethics and deontology in the management of the patient.
 2. The clinical case of a patient with respiratory disease. Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, treatment. Features of ethics and deontology in the management of the patient.
 3. The clinical case of a patient with a disease of the gastrointestinal tract. Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, treatment. Features of ethics and deontology in the management of the patient.
 4. The clinical case of a patient with kidney disease. Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, treatment. Features of ethics and deontology in the management of the patient.
 5. The clinical case of a patient with a disease of the hematopoiesis system. Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, treatment. Features of ethics and deontology in the management of the patient.
- (A sample of a clinical case is Appendix 3).

VII. Practice reporting forms

7.1. Practice reporting forms

Mandatory forms of practice reporting are the practice diary and the practice report.

7.1.1. Practice Diary

The practice diary should include daily: one medical history of the patient supervised on that day, interpretation of 5 instrumental methods, interpretation of 5 laboratory research methods. Protocols are drawn up for each day of work in practice.

The protocol should contain information about the date, topic(s) of the lesson(s), and the work performed.

The practice diary must be signed:

- a) after each protocol - by the head of the student's practice;
- b) on the title page - the head of the practice from the organization (university).

The practice diary is provided in printed (paper) form.

(A sample of the diary design is provided in Appendix 2).

7.1.2. Reporting work on practice

The reporting work is a report on the results of the student's (students') independent (or group) practical work on individual tasks and indicates the successful acquisition by the student of all necessary skills during practice.

The reporting work must be signed on the title page by the head of the practice from the organization (university) with an indication of the assessment received for it.

(A sample of the design of the reporting work is presented in Appendix 4).

Appendix 1

Sample design of an individual practice assignment

Federal State Budgetary Educational Institution of Higher Education

Volgograd State Medical University of
the Ministry of Health
Of the Russian Federation

AN INDIVIDUAL TASK

for the formation of competencies established by the work program of the practice
"Industrial practice: practice of a therapeutic profile"

a student of the course of the group
studying under the educational program
of the specialty specialty 05/31/01 Medical business,
orientation (profile) Medical business

(Full name of the student)

Internship period: from _____ to _____ .

The base of practical training: _____.

Head of practice from VolgSMU: Full name, contact phone number.

THE CONTENT OF THE PRACTICE

The procedure for conducting the practice:

- 1) The duration of the practice is 18 days (144 hours / 4 hours, 8 hours per day).
- 2) The student works as a medical assistant student under the supervision of the person responsible for the practice; the head of the practice corrects and controls his activities.

3) When starting an internship, the student must familiarize himself with the internal regulations of the enterprise (organization, institution), undergo a safety briefing.

4) The student keeps a diary with daily notes about the work done.

5) The practice ends with an intermediate certification, the time of which is set by the schedule of the educational process.

The purpose of the practice: to familiarize students with the main stages of a doctor's work in a therapeutic hospital; to work out the basic skills of providing therapeutic and preventive care to the population in a therapeutic hospital; to master the skills of providing emergency and emergency medical care to patients with therapeutic pathology at the hospital stage.

The tasks of the practice:

- consolidation of students' knowledge about the basic principles of the organization of medical and preventive care in a hospital setting;
- familiarization of students with the specifics of the organization and scope of work of a hospital doctor, with modern diagnostic capabilities of hospital clinical diagnostic services and training in their rational use;
- mastering the main stages of therapeutic and diagnostic work at the patient's bedside in the process of independent medical activity;
- development of students' clinical thinking skills in the diagnosis of the most common therapeutic diseases in a hospital setting, assessment of severity, features of course and treatment;
- psychological preparation of students for their future profession;
- teaching students to independently prepare medical documentation for a hospital doctor.

PLANNED PRACTICE RESULTS

During the internship, the student must acquire the skills (experience of activity):

- collecting complaints, anamnesis of life and disease in children and adults (their legal representatives), identifying risk factors and causes of disease development; examination and physical examination of children and adults (examination, palpation,

percussion, auscultation); diagnosis of the most common diseases in children and adults; identification of risk factors for major oncological diseases;

- formulation of a preliminary diagnosis, drawing up a plan for instrumental, laboratory, additional studies, consultations of specialist doctors; referral of patients to instrumental, laboratory, additional studies, consultations of specialist doctors in accordance with current medical care procedures, clinical recommendations, taking into account standards of medical care; interpretation of data from additional (laboratory and instrumental) examinations patients; making a preliminary diagnosis in accordance with the international statistical classification of diseases and health-related problems (ICD); the use of medical devices provided for in the order of medical care;
- differential diagnosis of diseases; recognition of conditions arising from sudden acute diseases, exacerbation of chronic diseases without obvious signs of threat to the patient's life and requiring urgent medical care;
- development of a treatment plan for children and adults with the most common diseases in accordance with current medical care procedures and clinical recommendations;
- development of a treatment plan for a disease or condition, taking into account the diagnosis, age and clinical picture in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care.

Upon completion of the internship, the student should know:

- basic concepts in the field of medicine;
- the procedure for collecting, storing, searching, processing, converting, and distributing information about diseases of internal organs;
- Fundamentals of medical ethics and deontology;

- topographic anatomy, etiology and pathogenesis and clinical picture, methods of diagnosis of the most common diseases; medical devices provided for in the order of medical care; age, gender and ethnic characteristics of the course of pathological processes; conditions requiring urgent medical care;
 - a methodology for collecting anamnesis of life and diseases, complaints from children and adults (their legal representatives);
 - principles and methods of providing medical care to patients in urgent conditions, in emergency situations, epidemics and in foci of mass destruction in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care methods of examination and physical examination (examination, palpation, percussion, auscultation);
 - Clinical signs of major emergency conditions;
 - methods of drug and non-drug treatment, medical indications for the use of medical devices for the most common diseases;
 - groups of medicines used to provide medical care in the treatment of the most common diseases; the mechanism of their action, medical indications and contraindications to the appointment; compatibility, possible complications, side effects, adverse reactions, including serious and unforeseen;
 - features of medical care in emergency situations;
 - capabilities of reference information systems and professional databases;
 - methods of information retrieval, information and communication technologies;
 - modern medical and biological terminology;
 - Principles of evidence-based and personalized medicine;
 - a list of laboratory and instrumental research methods for assessing comp
-
- etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, features of the course, complications and outcomes of diseases of internal organs;
 - clinical signs of sudden cessation of blood circulation and/or respiration;
 - rules of basic cardiopulmonary resuscitation;

- principles of operation of devices for external electrical pulse therapy (defibrillation);
- rules for performing external electrical pulse therapy (defibrillation) in case of sudden cessation of blood circulation and/or respiration.
- procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, standards of medical care;
- methods of laboratory and instrumental research to assess the state of health, medical indications for conducting research, rules for interpreting their results;
- etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, features of the course, complications and outcomes of diseases of internal organs;
- modern methods of using medicines, medical devices and therapeutic nutrition for diseases and conditions of the patient in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care;
- the mechanism of action of medicines, medical devices and therapeutic nutrition, medical indications and contraindications to their use; complications caused by their use;
- modern methods of non-drug treatment of diseases and conditions in the patient in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care;
- the mechanism of action of non-drug treatment; medical indications and contraindications to its use; side effects, complications caused by its use.

the student must be able to:

- use educational, scientific, popular science literature, the Internet for professional activities;

- apply ethical standards and principles of conduct of a medical professional in the performance of their professional duties;
- apply the rules and regulations of the doctor's interaction with colleagues and patients (their legal representatives).
- collect complaints, anamnesis of life and disease in children and adults (their legal representatives), identify risk factors and causes of disease development; apply methods of examination and physical examination of children and adults; carry out cancer screening;
- interpret the results of the examination and physical examination of children and adults; formulate a preliminary diagnosis, make a plan for laboratory, instrumental and additional studies in children and adults, in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care; use medical devices provided for by the procedure for providing medical care;
- send children and adults for laboratory, instrumental and additional studies, consultations with specialist doctors in accordance with current medical care procedures, clinical recommendations, taking into account medical care standards;
- interpret and analyze the results of basic (clinical) and additional (laboratory, instrumental) examination methods; carry out differential diagnosis of diseases in children and adults; identify clinical signs of sudden acute diseases, conditions, exacerbations of chronic diseases without obvious signs of life-threatening, requiring urgent medical care.
- to evaluate the main morphofunctional data, physiological conditions and pathological processes in the human body.
- recognize conditions that require emergency medical care, including in emergency situations, epidemics and in centers of mass destruction;
- perform basic cardiopulmonary resuscitation, defibrillation;
- use medicines and medical devices when providing medical care in case of emergency; use personal protective equipment.

- monitor the effectiveness and safety of non-medicinal and medicinal treatment methods, prevent or eliminate complications, side effects, undesirable reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of medicines and (or) medical devices, non-medicinal treatment;
- adjust treatment tactics based on the information received about the state of health and the effectiveness of treatment.
- to carry out an effective search for information necessary to solve the tasks of professional activity using reference systems and professional databases;
- use modern medical and biological terminology to identify clinical signs of conditions requiring urgent medical care;
- carry out emergency medical care measures;
- perform basic cardiopulmonary resuscitation in combination with electro-pulse therapy (defibrillation).
- collect complaints, anamnesis of the patient's life and illness and analyze the information received;
- perform a complete physical examination of the patient (examination, palpation, percussion, auscultation) and interpret its results;
- substantiate the need and scope of laboratory examination of the patient;
- substantiate the need and scope of an instrumental examination of the patient;
- justify the need to refer the patient for consultations with specialist doctors;
- analyze the results of the patient's examination, if necessary, justify and plan the scope of additional studies;
- interpret the results of collecting information about the patient's disease;
- interpret the data obtained during the laboratory examination of the patient;
- interpret the data obtained during the instrumental examination of the patient;
- interpret the data obtained during the consultations of the patient by specialist doctors;
- to carry out differential diagnosis of diseases of internal organs from other diseases;
- determine medical indications for the provision of emergency, including emergency specialized, medical care;

- use medical devices in accordance with current medical procedures, clinical recommendations (treatment protocols) on the provision of medical care, care taking into account the standards of medical care.
- draw up a treatment plan for the disease and the patient's condition, taking into account the diagnosis, the patient's age, the clinical picture of the disease in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care;

Requirements for the results of mastering the practice

As a result of the internship, the student must form the following competencies:

UK1.	He is able to carry out a critical analysis of problematic situations based on a systematic approach, develop a strategy for action
OPK-1.	He is able to implement moral and legal norms, ethical and deontological principles in his professional activity
OPK-4.	He is able to use medical devices provided for in the order of medical care, as well as to conduct examinations of the patient in order to establish a diagnosis.
OPK-5.	He is able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems.
OPK-6.	He is able to organize patient care, provide primary health care, ensure the organization of work and professional decision-making in case of urgent conditions at the pre-hospital stage, in emergency situations, epidemics and in foci of mass destruction.
OPK-7.	He is able to prescribe treatment and monitor its effectiveness and safety.
OPK-10.	He is able to understand the principles of modern information technologies and use them to solve professional tasks It is able to recognize and provide medical care in emergency or urgent forms in conditions that pose a threat to the patient's life, including conditions of clinical death (stopping vital functions of the human body (blood circulation and/or respiration).
PC-1.	He is able to conduct an examination of the patient in the presence of medical indications in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care

PC-2.	He is able to prescribe medication and non-drug treatment, taking into account the diagnosis, age and clinical picture of the disease in accordance with current medical care procedures, clinical recommendations (treatment protocols)
PC-3.	He is able to prescribe medication and non-drug treatment, taking into account the diagnosis, age and clinical picture of the disease in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care

The subject of individual tasks on the production practice of a therapeutic profile (the work is carried out in one direction):

1. "A clinical case of a patient with a disease of the cardiovascular system. Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, treatment. Features of ethics and deontology in the management of the patient".
2. "A clinical case of a patient with respiratory disease. Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, treatment. Features of ethics and deontology in the management of the patient".
3. "A clinical case of a patient with a disease of the gastrointestinal tract. Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, treatment. Features of ethics and deontology in the management of the patient".
4. "A clinical case of a patient with kidney disease. Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, treatment. Features of ethics and deontology in the management of the patient".
5. "A clinical case of a patient with a disease of the hematopoiesis system. Etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, treatment. Features of ethics and deontology in the management of the patient".

DEVELOPED BY:

The head of the practice from the organization

carrying out educational

activities (from VolgSMU) _____

(signed) (Full name)

AGREED:

The head of the practice
from the relevant organization _____
(signed) (Full name)

Approved at the meeting of the UMK of the Faculty of Medicine
(Protocol no. ___ of _____ G.).

Dean _____ S.A. Kalashnikov
(signature)

The individual task has been accepted for execution

(Full name of the student)

(student's signature)

" ___ " _____ 20___ G.

The student has fully implemented an individual practice assignment. A set of knowledge, skills and abilities that form the competencies of the internship program has been obtained.

The head of the practice from the relevant
organization _____
(signed) (Full name)

The head of the practice from the organization
carrying out educational
activities (from VolgSMU) _____
(signature)

" ___ " _____ 20___ G.

Appendix 2

A sample of the design of the practice diary

Federal State Budgetary Educational Institution
of Higher Education

"Volgograd State Medical University"
of the Ministry of Health of the Russian Federation

Department of Faculty Therapy

Specialty in the specialty 31.05.01 Medical business,
Orientation (profile) Medical business

PRACTICE DIARY
"Industrial practice:
the practice of a therapeutic profile"

4th year student(s)

(last name)

(name)

(middle name)

The head of the practice from the organization (university)
_____/ Full name/
(signature)

The head of the practice from the relevant organization
(practice bases) _____ / Full name/
(signature)

Volgograd, 202__

Rules for the design of the practice diary

A mandatory reporting document on the student's internship is the practice diary.

The practice diary should include protocols of various types of work (literary/methodological/experimental/analytical/other types of work) performed by the student during the practice.

Protocols are drawn up for each day of work in practice. The protocol should contain information about the date, topic(s) of the lesson(s), the work performed and research procedures (operations), as well as the primary data obtained and the results of their analysis during the individual assignment.

When logging work on individual tasks (FROM), it is necessary to adhere to the following algorithm:

The amount of work performed per day:

1. Write 1 medical history for the supervised patient with the justification of the diagnosis and prescribed treatment.
2. Interpretation of instrumental research methods: ECG, echocardiography, radiography, spirometry, etc. (5 studies per day).
3. Interpretation of laboratory studies (5 studies per day).
4. Make a brief conclusion / conclusions based on the results of the implementation of the.
5. As a protocol from the last day of practice, a printout of the presentation of the reporting work is presented in the diary.

The practice diary must be signed:

- a) after each protocol - by the head of the student's practice.
- b) on the title page - the head of the practice from the organization (university) and the head of the practice from the profile organization (practice base).

Specialty in the specialty 31.05.01 Medical business,
Orientation (profile) Medical business

PRACTICE DIARY

"Industrial practice: the practice of a therapeutic profile"

4th year student(s)

_____ (last name)
_____ (name)
_____ (middle name)

The head of the practice from the organization (university)

_____ / Full name/ (signature)

The head of the practice from the relevant organization (practice bases)

_____ / Full name/ (signature)

Volgograd, 202__

A sample of filling out a chronological practice diary.

Chronological diary of the practice

PROTOCOL No. 1.

Date 05.06.2024.

Thematic block: Organization of inpatient therapeutic services. Introduction to practice. Familiarization with the purpose and objectives of the practice. Organization of the therapeutic department of the hospital (staff, equipment).

Content (course of work): Curation of patients in the therapeutic department of the hospital.

Medical history.

Patient P., 63 years old, was admitted to the therapeutic department on 06/01/2024.

Complaints: I received complaints of compressive pains in the heart area with irradiation in the left arm, under the left shoulder blade, in the left half of the neck, occurring when walking 100 m, relieved by taking nitroglycerin under the tongue, general weakness, periodic interruptions in the work of the heart.

Anamnesis morbi: the patient considers himself for 2 years, when he began to worry about pain in the heart area when walking 500 meters and moderate physical activity. She was treated on an outpatient basis with a diagnosis of angina pectoris. I took bisoprolol 5 mg per day, aspirin cardio 100 mg per day, atorvastatin. In 2023, she underwent inpatient treatment in the cardiology department with a diagnosis of myocardial infarction. After discharge, she took metoprolol 25 mg 2 times a day, cardiomagnil 75 mg a day, rosuvastatin 10 mg 1 time a day. Since 06/01/2024, he has been undergoing planned inpatient treatment in the therapeutic department for examination and correction of treatment.

Anamnesis vitae: was born on 01.01.1961 in the city of Volgograd. I grew up and developed normally as a child. She graduated from high school. She graduated from the Institute with a degree in engineering. Currently retired. Has a son and a daughter, both healthy.

Of the diseases suffered: colds.

Type 2 diabetes mellitus since 2020, takes glidiab MV 30 mg 2 tab. x 1 time per day.

Hypertension has been taking indapamide 2.5 mg 1 tab since 2016. x 1 time per day, prestartium A 5 mg ½ tab. x 1 time per day.

He denies viral hepatitis B and C, tuberculosis, and sexually transmitted diseases.

She was not treated with hormones.

No blood transfusions were performed.

There is no drug intolerance.

He denies bad habits.

Heredity is not burdened.

Status praesens:

The general condition of the patient is of moderate severity.

Consciousness: clear.

Patient's position: active.

Physique: constitutional type, normosthenic, height 168 cm, body weight 66 kg.

The posture is straight.

Body temperature: 36.5 °C.

Facial expression: calm

Skin: normal color.

There is no swelling.

The lymph nodes are not enlarged, they are painless on palpation.

The thyroid gland is not enlarged.

THE CARDIOVASCULAR SYSTEM.

Inspection: The apical thrust is not visually determined.

Palpation: The pulse is symmetrical, with a frequency of 70 beats per minute, rhythmic, satisfactory filling and tension.

The apical thrust is palpated in the V intercostal space 1.5 cm outward from the left SCL.

Percussion: The limits of relative cardiac dullness: The right one is in the 4th intercostal space 1 cm outside of the right edge of the sternum.

The upper one is at the level of the 3rd rib between L. sternalis et L. parasternalis sinistrae.

The left one is in the 5th intercostal space, 1.5 cm outside of the left midclavicular line.

Auscultation: Heart tones are muffled, rhythmic contractions.

heart rate = 70 beats/min.

Blood pressure 150/90 mmHg.

RESPIRATORY SYSTEM

Chest examination – the shape of the chest is correct, symmetrically participates in the act of breathing.

Supra- and subclavian the pits are smoothed, the collarbones and shoulder blades are arranged symmetrically.

Breathing is rhythmic, BPD is 18 per minute.

SpO₂ = 96%.

Percussive pulmonary sound.

Auscultation: vesicular breathing, no wheezing.

THE DIGESTIVE SYSTEM.

The tongue is clean and moist. The abdomen is soft during palpation, painless in all parts.

The size of the liver according to Kurlov-10-8-7 See.

The liver and spleen are not palpable.

The chair is regular, decorated, of the usual color.

THE GENITOURINARY SYSTEM.

The symptom of pounding is negative on both sides.

Palpation kidneys are not available.

Urination is free and painless.

Exam:

ECG (06/01/24):

sinus rhythm, 62 per minute.

Horizontal position of the electric axis. Violation of repolarization processes in the posterior wall, apex, and lateral wall of the left ventricle.

ECHOCG (01.06.24):

Sealing of the valves of the AC. Concentric hypertrophy of the left ventricle. The systolic function of the left ventricle is preserved. DFLJ according to the pseudonormal type. LV dilation, LA, LP. Insufficiency of MK I art., TK I art. A small amount of fluid in the pericardial cavity. (a photocopy of the protocol was issued to the patient).

Holter monitoring (06/01/24):

sinus rhythm, with an average heart rate of 62 per minute. Single supraventricular extrasystoles 21 per day. (A photocopy of the protocol was issued to the patient).

Laboratory data:

A blood test for antibodies to syphilis by ELISA is negative (01.06.24).

A blood test for HBsAg is negative, antibodies to hepatitis C virus are not detected, ELISA AG/AT HIV is negative (01.06.24).

UAC (01.06.24): er – 3.75 x10 in 12/L, Hb – 110 g/L, MSN – 29.3 pg, Le -6.7 x10 in 9/L, ESR -21 mm/h. Coagulability is 5 minutes.

Glycemic profile (01.06.24): 11.00 – 7,8, 16.00 – 5,4, 20.00 – 6,7, 22.00 – 5.4, 06.00 – 4.6 mmol/l.

Coagulogram (06/01/24): prothrombin time 14.9 sec, INR – 0.8, APTT 30.2 sec.

Electrolytes (01.06.24): K - 3.85, Na – 145.3, Ca ion. – 1.3 mmol/L.

Liver samples (01.06.24): Bi -7.7 mmol/l, thymol 2.0, ALT 23.4 E/L, AST 37.1 E/L, LDH -309.0 E/L, CK – 112.6 E/L, alkaline phosphatase – 162.0 E/L.

HDL – 1.4 mmol/L, TG – 2.0 mmol/L, urea 5.6 mmol/L, creatinine 54.5 mmol/L.

General urine analysis (01.06.24): straw yellow color, transparent, acidic reaction, specific gravity 1005, no protein, leukocytes 5-7 in n/a, no erythrocytes, flat epithelium 7-8 in n/a, round epithelium is one in n/a.

The main diagnosis is IHD. Angina pectoris of tension FC III. Postinfarction cardiosclerosis, H IIa, FC III. Single supraventricular extrasystoles.

Concomitant diagnosis: Hypertension of stage III, grade 3, risk 4. Type 2 diabetes mellitus. Diabetic micro- and macroangiopathy. Diabetic polyneuropathy. The target glycosylated HbA1c is <7.5%.

Treatment is prescribed:

1. MgSO₄ solution 25% - 10.0, KCl solution 4% - 20.0 in 200, phys. solution of intravenous drip 1 time a day.
2. Bisoprolol 5 mg 1 tab. x 1 time per day. In the morning.
3. Pectrol 40 mg 1 tab. x 1 time a day, in the morning.
4. Indapamide 2.5 mg 1 tab. x 1 time per day. In the morning, on an empty stomach.
5. Prestarium A 5 mg ½ tab. x 1 time per day. In the evening.
6. Thromboass 100 mg 1 tab. x 1 time per day. In the evening.
7. Atrovastatin 20 mg 1 tab. x 1 time a day, at 21.00. 8. Glidiab MV 30 mg 2 tab. x 1 time per day. In the morning.

Individual tasks:

I. Interpretation of instrumental research methods (5 studies per day):

1. The ECG rhythm is sinus, the normal position of the EOS, signs of hypertrophy of the left ventricle. Left ECG type, high wave R in V5/V6 (>2.6 mV), deep S in V1 (>2.4 mV), R in V5/V6 + S in V1 >3.5 mB.
2. echocardiography – a decrease in PV of 38%, conclusion: CHF.
3. Radiography of OGK direct projection – the pulmonary fields are transparent, without focal and infiltrative changes, the roots of the lungs are heavy. The dome of the diaphragm is clear. Cardiovascular shadow without features. Conclusion: no pathological changes in the OGC were detected.
4. Spirometry - Conclusion: volumetric parameters (LV and FVC) are within the normal range, bronchial obstruction is mild. Explanation. The velocity indices at the end of exhalation are moderately reduced, OFV1/FVC and SOS25-75 are slightly reduced.
5. Gastric X-ray: The act of swallowing is not impaired. The esophagus and cardia are freely passable. The stomach is normotonic, usually located, its contours are smooth, the walls are elastic. The folds of the mucous membrane are longitudinal, unevenly thickened, and can be traced throughout. The displacement of the stomach is preserved. The peristalsis is lively, deep, symmetrical, and can be traced along both curvatures. The gatekeeper is centrally located, we pass freely. The bulb and horseshoe of the duodenum 12 are without features. The initial evacuation is timely. When examined in a horizontal position, the contrast mass is thrown into the esophagus. Conclusion: Reflux esophagitis.

II. Interpretation of laboratory studies (5 studies per day).

1. UAC: er – 3.03×10 in 12/L, Hb – 100 g/L, CPU - 0.7, Le - 8.9×10 in 9/L, ESR -12 mm/hour. Conclusion: mild hypochromic anemia.
2. Blood glucose: 10.9 mmol/l. Conclusion: hyperglycemia.
3. Coagulogram: prothrombin time 24.3 sec, INR – 2.94, APTT 55.1 sec. Conclusion: hypocoagulation.
4. Electrolytes: K - 3.05, Na – 141.8, Ca ion. – 1.28 mmol/L. Conclusion: hypokalemia.
5. Liver samples: Bi -9.41 mmol/L, ALT 340.1 E/L, AST 360.2 E/l. Conclusion: cytolysis syndrome.

Teacher _____/_____ /

A medical history that is written separately and for which to take a test.

An example of a clinical case of a patient with respiratory disease.

A clinical case.

Full name Ivanov Ivan Ivanovich

diagnosis:

Community-acquired left-sided lower lobe pneumonia of moderate severity.

-

Curator:

IV year student,

Group No . ,

Faculty of Medicine

I. PASSPORT DATA:

The age of the patient. 39 years old

Nationality. Russian

Date of receipt. 15.01.2024

Profession, position: engineer.

Place of work: Design Bureau No. 4.

Home address: Volgograd, ul .

Name of the medical institution: GUZ KB No. 4

By whom the patient is referred: polyclinic No. 1.

The diagnosis is directional: Community-acquired lower lobe left-sided pneumonia.

The clinical diagnosis is community-acquired lower lobe left-sided pneumonia.

The clinical diagnosis is final (final): Community-acquired left-sided lower lobe pneumonia of moderate severity.

Complications of the main diagnosis: Left-sided fibrinous pleurisy. DAY I.

II. PATIENT'S COMPLAINTS:

The patient complains of fever up to 38.5 ° C, dry cough, chest pain on the left, increased breathing, shortness of breath, sweating.

III. Anamnesis morbi:

He became acutely ill 2 days ago after hypothermia. The temperature rose to 38.5 °C, a dry cough began, shortness of breath and sweating appeared. On 15.01.2024, he applied to the polyclinic at his place of residence, where a preliminary diagnosis was made: Community-acquired pneumonia. An X-ray examination of the chest organs was performed: Left-sided lower lobe pneumonia, left-sided fibrinous pleurisy. The

patient was sent for inpatient treatment at the State Medical University KB No. 4. He was hospitalized in the pulmonology department with a diagnosis of Community-acquired left-sided lower lobe pneumonia. Left-sided fibrinous pleurisy.

IV. Anamnesis vitae:

He was born on 02.01.1985 in the city of Volgograd. I grew up and developed normally as a child. He graduated from high school. He graduated from the Institute with a degree in engineering. He works as an engineer. He is married, has a son and a daughter, both healthy. Of the diseases suffered: colds. He denies diabetes mellitus and hypertension. He denies viral hepatitis B and C, tuberculosis, and sexually transmitted diseases. He was not treated with hormones. No blood transfusions were performed. There is no drug intolerance. He denies bad habits. Heredity is not burdened.

V. Status praesens:

General condition of the patient: moderate severity. Consciousness: clear. Patient's position: active. Body type: constitutional, normosthenic, height 178 cm, body weight 76 kg. The posture is straight. Body temperature: febrile 38.5 °C. Facial expression: calm Skin: normal color. Rashes: herpetic rashes — herpes nasalis, localization of rashes near the wings of the nose on the right, isolated. There is no swelling. Visible mucous membranes (mouth, nose, eyes): the usual color. Lips are cyanotic.

THE CARDIOVASCULAR SYSTEM.

Inspection: The apical thrust is not visually determined. Palpation: The pulse is symmetrical, with a frequency of 100 beats per minute, rhythmic, satisfactory filling and tension. The apical thrust is palpated in the V intercostal space 1.5 cm inside the left SCL. Percussion: The limits of relative cardiac dullness: The right one is in the 4th intercostal space 1 cm outside of the right edge of the sternum. The upper one is

at the level of the 3rd rib between L. sternalis et L. parasternalis sinistrae. The left one is in the 5th intercostal space, 1.5 cm inside of the left midclavicular line. Auscultation: Heart tones are clear, sonorous; the ratio of tones is not changed, rhythmic contractions, heart rate = 100 beats/min, Blood pressure 120/70 mm

RESPIRATORY SYSTEM

Chest examination – the shape of the chest is correct, there is a lag in the left half of the chest in the act of breathing. Supra- and subclavian the pits are smoothed, the collarbones and shoulder blades are arranged symmetrically.

The type of breathing is thoracic. Breathing is rhythmic, BPD is 28 per minute. SpO₂= 93%.

Percussion is the shortening of the percussion sound to the left below the angle of the scapula.

Topographic percussion.

The lower borders of the right lung:

according to L. parasternalis, the upper edge of the 6th rib

according to L. medioclavicularis- the lower edge of the 6th edge

according to l. axillaris anterior- 7 edge

by L. axillaris media- 8 edge

according to l. axillaris posterior- 9 edge

according to L. scapularis- 10 edge

according to L. paravertebralis - at the level of the spinous process of the 11th thoracic vertebra

Lower borders of the left lung:

by L. parasternalis- -----

by L. medioclavicularis- -----

according to l. axillaris anterior- 7 edge

by L. axillaris Media- 9 edge

according to l. axillaris posterior- 9 edge

according to L. scapularis- 10 edge

according to L. paravertebralis- at the level of the spinous

THE DIGESTIVE SYSTEM.

The tongue is clean and moist. The abdomen is soft during palpation, painless in all parts. The size of the liver according to Kurlov-10-8-7 See

The liver and spleen are not palpable. The chair is regular, decorated, of the usual color.

THE GENITOURINARY SYSTEM.

The symptom of pounding is negative on both sides. Palpation kidneys are not available. Urination is free and painless.

NEURO-MENTAL STATE.

My mind is clear. Emotionally labile. Sleep is not disturbed. The movements are coordinated. The gait is even. There are no paresis or paralysis.

The phenomena of red dermographism are expressed. The pupils' reaction to light is preserved.

The results of instrumental research:

ECG: sinus rhythm, 92 per minute. The normal position of the electric axis.

Radiography of the OGC is a direct and left lateral projection: the right lung without focal and infiltrative changes. On the left, in the basal segments, infiltration of pulmonary tissue of a focal-drain nature is noted, the costal pleura is compacted. The fluid in the pleural cavities is not detected. The roots of the lungs are structural. The dome of the diaphragm is clear. The cardiovascular shadow is within the normal range.

Zacl. Left-sided n/a pneumonia. Left-sided pleurisy.

Ultrasound of the pleural cavities: fluid is not detected in the pleural cavities.

Ultrasound of the abdominal cavity and kidneys: no changes were detected.

Echocardiography: Normal LV geometry. LV systolic function is preserved. The DFLJ has not been changed. There were no areas of violation of local contractility.

Laboratory data:

The ELISA blood test for antibodies to syphilis is negative. The blood test for HBsAg is negative, antibodies to hepatitis C virus have not been detected, ELISA AG/AT HIV is negative

GENERAL BLOOD TEST:

Erythrocytes- $4.2 \times 10^{12}/l$, Hb-120g/l CP – 0.86, Leukocytes- $15 \times 10^9/L$, P-9%, C-71%, E-3%, M-2%, L-15%, ESR-32mm/h.

BIOCHEMICAL BLOOD ANALYSIS:

Blood glucose: 5.8 mmol/l.

Coagulogram: prothrombin time 15.5 sec, INR – 1.24, APTT 26.4 sec.

Electrolytes: K - 4.1, Na – 135.6, Ca ion. – 1.16 mmol/L.

Liver samples: Bi -7.7 mmol/l, ALT 12.2, AST 28.4 E/L,

Cholesterol 4.9 mmol/L, creatinine – 64 mmol/L.

general urine analysis: straw yellow color, transparent, acidic reaction, specific gravity 1009, no protein, white blood cells 3-4 in n/a, no erythrocytes, flat epithelium is single in n/a.

General sputum analysis: white color, purulent character, viscous consistency, leukocytes at ½ n/w, no erythrocytes, flat epithelium 25-30 n/w.

Tank. sputum culture: Streptococcus pneumoniae. High sensitivity to cephalosporin antibiotics: ceftriaxone, cefotaxime, macrolides azithromycin.

Differential diagnosis:

Tuberculosis of the lungs: this is a tuberculous lesion of the respiratory organs caused by MBT with preserved sensitivity to first-line PTP.

Justification for differential diagnosis: X-ray pattern similar to VP, respiratory symptoms, intoxication

Examinations: CT scan of the thoracic segment, sputum microscopy,

FBS with flushing water intake

Criteria for excluding the diagnosis: the presence of mycobacterium tuberculosis in at least one of the smears during microscopy makes it possible to verify the diagnosis.

Pulmonary embolism: occlusion of the trunk or main branches of the pulmonary artery by a thrombus or its particles formed mainly in the veins of the lower extremities, pelvis, less often in the cavities of the right heart and brought by blood flow into the pulmonary artery.

Justification for differential diagnosis: X-ray pattern similar to VP, respiratory symptoms, intoxication

Examinations: CT of the thoracic segment in angioregime

Criteria for excluding the diagnosis: acute shortness of breath,

The final diagnosis:

Based on complaints: fever to 38.5 °C, dry cough, chest pain on the left, increased breathing, shortness of breath, sweating.

Anamnesis data: he became acutely ill 2 days ago after hypothermia. The temperature rose to 38.5 °C, a dry cough began, shortness of breath and sweating appeared. On 01/15/2022, he applied to the polyclinic at his place of residence, where a preliminary diagnosis was made: Community-acquired pneumonia. An X-ray examination of the chest organs was performed: Left-sided lower lobe pneumonia, left-sided fibrinous pleurisy. The patient was referred for inpatient treatment at the Hospital No. 1. He was hospitalized in the pulmonology department with a diagnosis of Community-acquired left-sided lower lobe pneumonia. Left-sided fibrinous pleurisy.

Objective status data: Heart rate = 100 beats/min, Blood pressure 120/70 mmHg. febrile 38.5 °C, herpetic rashes, lip cyanosis, lagging of the left half of the chest in the act of breathing, left below the angle.

Instrumental examination data: radiography of the OGC direct and left lateral projection: right lung without focal and infiltrative changes. On the left, in the basal segments, infiltration of pulmonary tissue of a focal-drain nature is noted, the costal pleura is compacted.

Laboratory data: Leukocytes- $15 \times 10^9/l$, P-9%, C-71%, E-3%, M-2%, L-15%, ESR-32mm/h, tank. sputum culture: Streptococcus pneumoniae

The differential diagnosis was carried out with: pulmonary tuberculosis, pulmonary embolism.

The main disease is community-acquired left-sided lower lobe pneumonia of moderate severity.

The main complication is left-sided fibrous pleurisy. respiratory failure 1

Treatment was carried out:

1. Cefotaxime 2.0 i/v cap. x 1 time per day for 10 days.
2. Azithromycin 500 mg IV drip x 1 time per day for 7 days.
3. Sol. Ringer's 500.0 x 1 time per day in/ in cap.
4. Sol. Na Cl 0.9% - 500.0 + Acidi ascorbinici 5%-4.0 i / v drip x 1 time per day.
5. Ambroxol 1 tab. x 3 times a day.
6. Ibuprofeni 200 mg 1 tab. X 3 times a day, 7 days.
7. Caps. "Linex" 1 caps. x 3 times a day.
8. Omeprazoli 20 mg 1 tab. x 2 times a day.
- 9 . Suprastini 1 tab. x 1 time per day.

Epicrisis

The patient, Afanasyev Alexander Petrovich, born on 02.01.1985 (39 years old), was admitted to the pulmonology department with a diagnosis of Community-acquired left-sided lower lobe pneumonia. Left-sided fibrinous pleurisy. Upon admission, he complained of: fever up to 38.5 ° C, dry cough, chest pain on the left, increased breathing, shortness of breath, sweating.

Objectively: Heart rate = 100 beats /min, Blood pressure 120/70 mmHg. febrile 38.5 ° C, herpetic rashes, lip cyanosis, lagging of the left half of the chest in the act of breathing, moist small-bubbly wheezes on the left below the angle of the scapula, pleural friction noise.

Instrumental examination data: radiography of the OGC direct and left lateral projection: right lung without focal and infiltrative changes. On the left, in the basal segments, infiltration of pulmonary tissue of a focal-drain nature is noted, the costal pleura is compacted.

Laboratory data: Leukocytes- $15 \times 10^9/l$, P-9%, C-71%, E-3%, M-2%, L-15%, ESR-32mm/h, tank. sputum culture: Streptococcus pneumoniae.

Thus, based on complaints, medical history, life history, assessment of the present condition, data from instrumental and laboratory research methods and differential diagnosis, a clinical diagnosis was made:

The main disease is community-acquired left-sided lower lobe pneumonia of moderate severity.

Complications of the main diagnosis: Left-sided fibrinous pleurisy. DAY I.

In accordance with the diagnosis, treatment was prescribed: Cefotaxime 2.0 i / v drops x 1 time per day for 10 days, Azithromycin 500 mg I / v drip x 1 time per day for 7 days, Sol. Ringer's 500.0 x 1 time per day in/ in cap., Sol. Na Cl 0.9% - 500.0 with ascorbic acid 5%-4.0 iv drip x 1 time per day., Ambroxol 1 tab. x 3 times a day., Ibuprofeni 200 mg 1 tab. X 3 times a day, 7 days., Caps. "Linex" 1 caps. x 3 times a day., Omeprazoli 20 mg 1 tab. x 2 times a day., Suprastini 1 tab. x 1 time per day.

Against the background of treatment, there is a positive trend: a decrease in body temperature to normal values, an equalization of blood pressure, an improvement in saturation, a decrease in heart rate, a decrease in BPD. Prognosis for life, for work: favorable, subject to the doctor's instructions: physical activity, taking prescribed medications.

The report can be placed at the end of the diary

A report on the results of the student's practical work.

No	Type of work performed	The amount recommended for offset	Done
1.	Curation of patients	16	
2.	ECG interpretation	16 - 18	
3.	Interpretation of radiographs	16 - 18	-
4.	Interpretation of endoscopic research methods	16 - 18	
5.	Interpretation of spirometry	3 - 4	
6.	Interpretation of ultrasound diagnostics	6 - 8	
7.	Interpretation of the general blood test	16 — 20	
8.	Interpretation of biochemical blood tests	16 - 18	
9.	Interpretation of urine tests	16 - 18	
10.	Interpretation of coprograms	16 - 18	
11.	Interpretation of sputum tests	6 - 8	
12.	Interpretation of the myelogram	6 - 8	

The list of formed competencies and assessment of their assimilation

№	Code	The text of the competence	The level of development	Teacher's signature
1.	UK1..	He is able to carry out a critical analysis of problematic situations based on a systematic approach, develop a strategy for action	2	
2.	OPK-1.	He is able to implement moral and legal norms, ethical and deontological principles in his professional activity	2	
3.	OPK-4	He is able to use medical devices provided for by the procedure for providing medical care, as well as to conduct examinations of the patient in order to establish a diagnosis.	2	
4.	OPK-5	He is able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems.	2	
5.	OPK-6	He is able to organize patient care, provide primary health care, ensure the organization of work and professional decision-making in case of urgent conditions at the pre-hospital stage, in emergency situations, epidemics and in foci of mass destruction.	2	
6.	OPK-7	He is able to prescribe treatment and monitor its effectiveness and safety.	2	
7.	OPK-10	He is able to understand the principles of modern information technologies and use them to solve professional tasks	2	
8.	PC-1.	It is able to recognize and provide medical care in emergency or urgent forms in conditions that pose a threat to the patient's life, including conditions of clinical death (stopping vital functions of the human body (blood circulation and/or respiration).	2	
9.	PC-2.	He is able to conduct an examination of the patient in the presence of medical indications in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care	2	
10.	PC-3.	He is able to prescribe medication and non-drug treatment, taking into account the diagnosis, age and clinical picture of the disease in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care	2	

