МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ РЕСПУБЛИКИ БЕЛАРУСЬ
УЧРЕЖДЕНИЕ ОБРАЗОВАНИЯ
«ГРОДНЕНСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ УНИВЕРСИТЕТ»
Кафедра пропедевтики внутренних болезней

ПРОПЕДЕВТИКА ВНУТРЕННИХ БОЛЕЗНЕЙ

методические рекомендации для студентов III курса
факультета иностранных учащихся*, обучающихся на английском языке*

PROPAEDEUTICS OF INTERNAL DISEASES

methodical recommendations for the III year students
of Medical Faculty for International Students
who are studying in English medium

Гродно, 2019
ГрГМУ

Методические рекомендации подготовлены сотрудниками кафедры пропедевтики внутренних болезней УО «Гродненский государственный медицинский университет» зав. кафедрой доцентом Пронько Т.П., доцентом Сурмач Е.М. в соответствии с типовой учебной программой по дисциплине «Пропедевтика внутренних болезней» для специальностей 1-79 01 01 «Лечебное дело», утвержденной Министерством образования Республики Беларусь 04.09.2014г., регистрационный номер ТД – L. 399/тип.

MAIN QUESTIONS FOR PRACTICAL TRAININGS

Study 1
Main complaints of patients with pulmonary diseases. Inspection and palpation of the chest.

Control questions:

1. Main complaints of patients with pulmonary diseases.
2. General inspection of the patient: forced position due to the bronchial asthma attack, pathology of pleura; central cyanosis, mechanism of appearance; digital clubbing.
3. Reference points and vertical lines which allow describing an abnormality of the chest.
4. The lungs lobes projection on the chest.
5. Normal shape of the chest.
6. Pathological shape of the chest.
7. Rate and depth of breathing: normal and pathological. Types of respiration.
8. Rhythm of breathing. Normal and pathologic rhythms of breathing.
9. Palpation of the chest. Technique of the chest palpation.
10. Tactile fremitus. Technique of the tactile fremitus determination. What is the diagnostic meaning of the tactile fremitus?
11. Determination of the chest circumference, chest expansion.

Practical skills:

1. History taking of patient with respiratory tract diseases.
2. Technique of the chest inspection.
3. Technique of the determination of the rate and depth of breathing, rhythm of breathing.
4. Technique of the determination of the shape of the chest.
5. Technique of the chest palpation (painful areas, tactile fremitus, elasticity of the chest).
6. Determination of the chest circumference, chest expansion.

Study 2
Percussion of the lungs.

Control questions:

1. Percussion. Definition. Physical basics of percussion.
2. The role of the L. Auenbrugger in the development of percussion.
3. Types of percussion and their characteristic.
4. Percussion sounds and their characteristics.
5. General technique of percussion.
6. Technique of comparative percussion of the lungs.
7. Abnormalities of lung percussion.
8. Technique of topographic percussion of the lungs. Diagnostic meaning of the topographic percussion abnormalities.
9. The inferior border of the lungs in healthy person.
10. The superior border of the lungs in healthy person. The width and the height of the apex of the lungs.
11. The technique of determination of the diaphragmatic excursion. Normal values. Abnormalities of diaphragmatic excursion.

Practical skills:

1. General technique of percussion.

2. Technique of comparative and topographic percussion of the lungs.

Study 3
Auscultation of the lungs.

Control questions:

1. Physical basis of the lungs auscultation.
2. The role of the René-Théophile-Hyacinthe Laennec in the development of the auscultation.
3. Direct and indirect auscultation, their characteristic.
4. General rules for auscultation. The main technique of auscultation.
5. Classification of the breath sounds, main and adventitious breath sounds.
6. Vesicular breath sounds, mechanism of appearance and diagnostic meaning.
7. Changes of vesicular breath sounds, diagnostic meaning.
8. Bronchial breath sounds, their characteristic, mechanism of appearance.
9. Pathological bronchial breath sounds, diagnostic meaning.
10. Classification of adventitious sounds.
11. Crackles, characteristic and mechanism of appearance.
12. Wheezes, characteristic and mechanism of appearance.
13. Rhonchi, characteristic and mechanism of appearance.
14. Pleural rub, characteristic and mechanism of appearance.
15. Differential diagnostic of crackles, rhonchi and pleural rub.
16. Bronchophony. The technique of bronchophony.
17. What is the diagnostic meaning of the results of bronchophony?

Practical skills:

1. General technique of the lungs auscultation.
2. Auscultation of the main and adventitious sounds.

Study 4
Instrumental and laboratory methods to examine lungs. Syndrome of airflow obstruction, syndrome of hyperinflation. Principles of treatment.

Control questions:

1. The sputum analysis. The method of the sputum collection for laboratory analysis.
2. The sputum analysis. Macroscopic examination of the sputum.
3. The sputum analysis. Microscopic examination of the sputum.
4. Sputum culture test.
5. Spirometry, static and dynamic lung volumes.
6. Spirometry, principles of interpretation.
7. Pneumotachometry, principles of interpretation.
8. The main other methods of the respiratory tract investigation (measurement of peak flow, X-ray, CT, bronchoscopy, biopsy).
9. Syndrome of the airflow obstruction.
10. Acute bronchitis: causes, risk factors, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
11. Chronic non obstructive bronchitis: causes, risk factors, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
12. Bronchial asthma: causes, risk factors, classification, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
13. First aid for patients with attack of suffocation.
14. Chronic obstructive pulmonary disease (COPD): causes, risk factors, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
15. Syndrome of the lungs hyperinflation.
16. Emphysema of the lungs: causes, risk factors, classification, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.

Practical skills:

1. Sputum test interpretation.
2. Spirometry results interpretation.

Study 5
Syndrome of consolidation of the lungs tissue. Syndrome of pleural effusion. Pleural fluid analysis. Principles of treatment.

Control questions:

1. Syndrome of consolidation of the lungs tissue.
2. Lobar pneumonia: etiology and pathogenesis (pathological anatomy in lobar pneumonia).
3. Lobar pneumonia: complaints and history of present illness.
4. Lobar pneumonia: clinical features (physical examination by stages of the disease, laboratory and instrumental testing by stages of the disease). Principles of treatment.
5. Bronchopneumonia: causes, risk factors, complaints. Clinical features (physical examination, laboratory and instrumental testing). Principles of treatment.
6. Syndrome of the compression atelectasis.
7. Syndrome of the pleural effusion.
8. Syndrome of the pneumothorax.
9. Dry pleurisy: causes, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
10. Exudative pleurisy: causes, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
11. Technique of aspiration of pleural fluid in the case of pleural effusion. Pleural fluid analysis.
12. The distinction between transudates and exudates.

Practical skills:

1. Sputum test interpretation in pneumonia.
2. Pleural fluid test interpretation.

Study 6
Syndrome of presence of the cavity in the lungs. Syndrome of acute and chronic respiratory failure. Principles of treatment.

Control questions

1. Syndrome of presence of the cavity in the lungs.
2. Lung abscess: causes, risk factors, complaints, physical examination, blood test, sputum examination, chest-x-ray data in patients with lungs abscess before and after perforation. Principles of treatment and prophylaxis
3. Sputum test interpretation in lung abscess.
4. Bronchiectasis: causes, classification, clinical features (complaints, physical examination, blood test, sputum analysis, chest-x-rays examination). Principles of treatment and prophylaxis
5. Respiratory failure, definition, causes.
6. Classification of respiratory failure.
7. Acute respiratory failure, etiology, classification, complaints, physical examination, laboratory and instrumental testing.
8. First aid in acute respiratory failure.
9. Chronic respiratory failure, etiology, classification, complaints, physical examination, laboratory and instrumental testing.

Practical skills:

1. Sputum test interpretation in lung abscess.
2. Spirometry results interpretation in respiratory failure.

Study 7

Mini-examination: respiratory tract diseases.

Control questions:

1. Main complaints of patients with respiratory tract diseases, pathogenesis of these complaints.
2. Reference points and vertical lines of the chest (surface landmarks of the thoracic wall).
3. The lungs lobes projection on the chest.
4. Normal shape of the chest. Pathological shape of the chest. Symmetry of the chest.
5. Rate and depth of breathing: normal and pathological. Types of respiration.
6. Rhythm of breathing. Normal and pathologic rhythms of breathing.
7. Palpation of the chest. Technique of the chest palpation.
8. Tactile fremitus and elasticity of the chest, general technique, normal and pathological findings.
9. Determination of the chest circumference, chest expansion.
10. Percussion. Definition. Physical basis of percussion.
11. Types of percussion and their characteristic.
12. General technique of percussion.
13. Technique of comparative percussion of the lungs.
14. Percussion sounds and their characteristics.
15. Abnormalities of the lung percussion.
16. Technique of topographic percussion of the lungs.
17. The inferior border of the lungs in healthy person.
18. The superior border of the lungs in healthy person.
19. The width and height of the apex of the lungs.
20. The technique of determination of diaphragmatic excursion. Normal values. Abnormalities of diaphragmatic excursion.
21. Auscultation, definition of auscultation. Physical bases of auscultation.
22. Direct auscultation and indirect auscultation, their characteristic.
23. General rules for auscultation. Technique of the lungs auscultation.
24. Classification of the breath sounds, main and adventitious breath sounds.
25. Vesicular breath sounds, mechanism of appearance and diagnostic meaning.
26. Changes of vesicular breath sounds, diagnostic meaning.
27. Bronchial breath sounds, their characteristic, mechanism of appearance.
28. Pathological bronchial breath sounds, diagnostic meaning.
29. Classification of adventitious sounds.
30. Crackles, characteristic and mechanism of appearance.
31. Wheezes, characteristic and mechanism of appearance. Rhonchi, characteristic and mechanism of appearance.
32. Pleural rub, characteristic and mechanism of appearance.
33. Differential diagnostic of crackles, rhonchi and pleural rub.
34. Bronchophony. The technique of the bronchophony. What is the diagnostic meaning of the results of bronchophony
35. The sputum analysis. Collection of sputum for laboratory analysis.
36. Macroscopic examination of sputum.
37. Microscopic examination of sputum.
38. Sputum culture test.
39. Pleural fluid test.
40. Spirometry, static and dynamic lung volumes. Spirometry, principles of interpretation.
41. Pneumotachometry, principles of interpretation.
42. Peakflowmetry, technique and diagnostic meaning.
43. Pulse oximetry, technique and diagnostic meaning.
44. Syndrome of the airflow obstruction.
45. Acute bronchitis: causes, risk factors, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
46. Chronic non obstructive bronchitis: causes, risk factors, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.

47. Bronchial asthma: causes, risk factors, classification, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment. First aid for patients with attack of suffocation.

48. Chronic obstructive pulmonary disease (COPD): causes, risk factors, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.

49. Syndrome of the lungs hyperinflation. Emphysema of the lungs: causes, risk factors, classification, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment and prophylaxis.

50. Syndrome of consolidation of the lungs tissue.

51. Lobar pneumonia: etiology and pathogenesis (pathological anatomy in lobar pneumonia); complaints and history of present illness; clinical features (physical examination by stages of the disease, laboratory and instrumental testing by stages of the disease). Complications. Principles of treatment and prophylaxis.

52. Bronchopneumonia: causes, risk factors, complaints. Clinical features (physical examination, laboratory and instrumental testing). Principles of treatment and prophylaxis.
53. Syndrome of the pleural effusion.
54. Technique of aspiration of pleural fluid in the case of pleural effusion. Pleural fluid analysis. The distinction between transudates and exudates.
55. Dry pleurisy: causes, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment and prophylaxis.
56. Exudative pleurisy: causes, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment and prophylaxis.
57. Syndrome of the compression atelectasis. Clinical features, principles of treatment.
58. Syndrome of the pneumothorax.
59. Syndrome of presence of the cavity in the lungs.
60. Lung abscess: causes, risk factors, complaints, physical examination, blood test, sputum examination, chest-x-ray data in patients with lungs abscess before and after perforation. Principles of treatment and prophylaxis.
61. Bronchiectasis: causes, classification, clinical features (complaints, physical examination, blood test, sputum analysis, chest-x-rays examination). Principles of treatment and prophylaxis.
62. Respiratory failure, definition, causes. Classification of the respiratory failure.
63. Acute respiratory failure, etiology, classification, complaints, physical examination, laboratory and instrumental testing. First aid in acute respiratory failure.
64. Chronic respiratory failure, etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.

Study 8

Main complaints of patients with diseases of cardiovascular system. General inspection of patients with cardiovascular system diseases. Inspection, palpation and percussion of the heart.

Control questions

1. Main complaints of patients with diseases of cardiovascular system and their pathogenesis. History of the present illness.
2. General inspection of patients with diseases of cardiovascular system (main symptoms).
3. Inspection and palpation of the neck and heart area.
4. Apical impulse, inspection, palpation and characteristics.
5. Right ventricular impulse, palpation and characteristics.
6. Pathological impulses or pulsation and their characteristic.
7. Pathological pulsation in the epigastrium. Diagnostic meaning.
8. Technique of the heart percussion.
9. The borders of the relative heart dullness in healthy persons.
10. Abnormalities of the relative heart dullness borders.
11. The borders of absolute heart dullness in healthy persons.
12. Changes of the borders of the heart in different cardiac diseases.
13. Changes of the borders of the heart in different respiratory tract diseases.
14. Different types of the configuration of heart.

Practical skills:

1. Inspection and palpation of the heart area.
2. Technique of the heart percussion (relative heart dullness, absolute heart dullness).

Study 9

Auscultation of the heart. Heart sounds.

Control questions

1. Projection of the valves on the anterior surface of the chest. Places of the valves auscultation.
2. General rules for the heart auscultation.
3. Mechanism of formation of the first and second heart sounds.
4. The differences between the first and the second heart sounds.
5. The third and the forth heart sounds.
6. Changes of the heart sound loudness. The extracardial causes.
7. Changes of the first heart sound (S1) loudness.
8. Causes of the first heart sound (S1) changes.
9. Changes of the second heart sound (S2) loudness.
10. Split of the heart sounds.
11. The "opening snap". When does it appear?
12. Gallop rhythm.
13. Embryocardia.

Practical skills:

1. Technique of the heart auscultation.
2. Auscultation of the abnormalities of the heart sounds due to diseases.

Study 10

Auscultation of the heart. Heart murmurs.

Control questions

1. The mechanism of origin of the heart murmurs.
2. Factors, influenced on the loudness of the murmurs.
3. Classification of the murmurs.
4. Organic valvular heart murmurs, the mechanism of appearance of the systolic and diastolic murmurs. Examples of diseases.
5. Attributes of heart murmurs. The shape or configuration of murmurs. The grade of the murmurs.
6. The mechanism of origin of organic muscular murmurs.
7. Functional murmurs. The mechanism of origin of the functional murmurs. The difference between organic and functional murmurs.
8. Pericardial friction rub, the mechanism of appearance and characteristics. The difference between pericardial friction rub and pleural rub and organic heart murmurs.
9. Pleuropericardial friction murmurs.
10. Murmur is a main sign of organic heart pathology. Systolic murmurs, mechanism of origin, characteristics. Diastolic murmurs, mechanism of origin, characteristics.
11. Points of auscultation of the heart murmurs.

Practical skills:

1. Technique of the heart murmurs auscultation.

Study 11

Arterial pulse. Blood pressure.

Control questions

1. Methods of the objective examination of the veins and arteries (pulsation, elasticity, pathological findings (dilation or aneurysms).
2. Neck pulsations: carotid arterial pulsation and jugular venous pulsation, causes of the pulsation of epigastrium.
3. Arterial pulse. Methods of the pulse palpation. Diagnostic meaning of the palpation of different arteries.
4. The characteristics of the pulse (rate, rhythm, tension, volume, amplitude and contour of the pulse wave).

5. Methods of the vessels examination (angiography, ultrasound, pulse wave velocity).

6. Methods of blood pressure (BP) measurement. Korotkoff Sounds. The technique of blood pressure measurement (Korotkoff method).
7. Normal ranges for blood pressure in adult humans.
8. Venous pulse. Phlebography: normal and abnormal findings.
9. Venous pressure. Jugular venous pressure: normal and abnormal findings.
10. Syndromes of the arterial venous and lymphatic insufficiency, acute and chronic.

Practical skills:

1. Technique of the inspection and palpation of vessels.
2. Technique of the pulse palpation.
3. Technique of BP measurement.

Study 12
Electrocardiography. Normal ECG. ECG features of atrial and ventricular enlargement.

Control questions

1. The electrophysiological basis of electrocardiography. Membrane potentials theory of the ECG.
2. The cardiac conduction system.
3. The main electrophysiological properties of the myocardium (automaticity, contractility, conductability and excitability).
4. The electrocardiogram equipment and ECG registration technique.
5. ECG leads.
6. ECG waves, intervals and segments. What does each wave on an ECG represent?
7. ECG axis interpretation.
8. The plan of the ECG interpretation.
9. ECG features of the right and left atrial hypertrophy, the right and left ventricular hypertrophy.
10. Echocardiography, main parameters.

Practical skills:

1. The technique of the ECG registration.
2. ECG interpretation.

Study 13
Electrocardiography. Disorders of impulse formation.

Control questions

1. The cardiac conduction system.
2. Classification of arrhythmias. Mechanisms of appearance of arrhythmias.
3. Disorders of automaticity of sinus node: sinus tachycardia, sinus bradycardia, sinus arrhythmia, sinus node disease (sick sinus syndrome), causes, clinical characteristics and ECG features.
4. Ectopic rhythms, which are not connected with disorders of automaticity: extrasystoles (atrial, AV node, ventricular), paroxysmal tachycardia (atrial, AV node, ventricular), causes, clinical characteristics and ECG features.
5. Paroxysmal tachycardia (supraventricular and ventricular), causes, clinical characteristics and ECG features.
6. The main principles of arrhythmias treatment.

Practical skills:

1. Clinical characteristics and ECG features of arrhythmias (patient's examination and ECG interpretation).

Study 14
Electrocardiography. Disorders of impulse conduction.

1. Disorders of impulse conduction**: s**inoatrial block (I, II, III degree), clinical characteristics and ECG features.
2. Disorders of impulse conduction**:** intraatril block, clinical characteristics and ECG features.
3. Disorders of impulse conduction**:** atrioventricular block (I, II, III degree), clinical characteristics and ECG features.
4. Left bundle branches block (LBBB), clinical characteristics and ECG features.
5. Right bundle branches block (RBBB), clinical characteristics and ECG features.
6. Atrial flutter and fibrillation, ventricular flutter and fibrillation, clinical characteristics and ECG features.
7. Ventricular flutter and fibrillation, clinical characteristics and ECG features.
8. First aid in ventricular fibrillation. Definition of the electrical cardioversion and transoesophageal cardiostimulation.

Practical skills:

1. Clinical characteristics and ECG features of arrhythmias (patient's examination and ECG interpretation).

Study 15
Rheumatic fever. Mitral stenosis. Mitral regurgitation. Principles of treatment.

Control questions

1. Rheumatic fever: definition, etiology and pathogenesis.
2. Rheumatic fever: pathological changes of tissues.
3. Rheumatic fever: classification.
4. Rheumatic fever: clinical features (complaints, physical examination – the Jones criteria for diagnosis of rheumatic fever).
5. Rheumatic fever: laboratory and instrumental testing. Principles of treatment and prophylaxis.
6. Myocarditis: etiology and pathogenesis, classification.
7. Myocarditis: complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
8. Mitral regurgitation: definition, causes, changes of hemodynamics due to the mitral regurgitation.
9. Mitral regurgitation: complaints, physical examination, laboratory and instrumental testing (ECG, Echocardiography, X-ray). Principles of treatment and prophylaxis.
10. Mitral Stenosis: definition, causes, changes of hemodynamics due to the mitral stenosis.
11. Mitral Stenosis: complaints, physical examination, laboratory and instrumental testing (ECG, Echocardiography, X-ray). Principles of treatment and prophylaxis.

Practical skills:

1. Diagnostic criteria of the mitral valve pathology.
2. Diagnostic criteria of the myocarditis and chronic rheumatic heart disease.

Study 16

Infective (Bacterial) endocarditis. Aortic stenosis. Aortic regurgitation. Principles of treatment.

Control questions

1. Infective endocarditis: definition, etiology and pathogenesis, classification.
2. Infective endocarditis: complaints, physical examination, laboratory and instrumental testing.
3. Infective endocarditis: principles of treatment and prophylaxis.
4. Aortic regurgitation: definition, causes, changes of hemodynamics due to the aortic regurgitation.
5. Aortic regurgitation: complaints, physical examination, laboratory and instrumental testing (ECG, Echocardiography, X-ray). Principles of treatment and prophylaxis.
6. Aortic stenosis: definition, causes, changes of hemodynamics due to aortic stenosis.
7. Aortic stenosis: complaints, physical examination, laboratory and instrumental testing (ECG, Echocardiography, X-ray). Principles of treatment and prophylaxis.

Practical skills:

1. Diagnostic criteria of the infective endocarditis.
2. Diagnostic criteria of the aortic valve pathology.

Study 17

Arterial hypertension. Secondary hypertension. Pulmonary hypertension. Principles of treatment.

Control questions

1. Blood pressure measurement technique. Healthy blood pressure ranges.
2. Risk factors of the arterial hypertension.
3. Definition and classification of the arterial hypertension.
4. Stratification of the risk factors of the arterial hypertension.
5. Pathogenesis of target organ damage in hypertension.
6. Arterial Hypertension, clinical features (complaints, physical examination, laboratory and instrumental testing). Complications.
7. The main principles of the treatment and prophylaxis of the arterial hypertension.
8. Hypertensive crisis: definition, complaints, physical examination, first aid.
9. Secondary hypertension, classification, clinical features.
10. Pulmonary hypertension**:** etiology, classification, complaints, physical examination, instrumental testing.

Practical skills:

1. Blood pressure measurement technique.
2. Examination of patients with arterial hypertension.

Study 18

Atherosclerosis. Ischemic heart disease (IHD). Stable stenocardia. Principles of treatment.

Control questions

1. Lipid profile test, target for IHD patients.
2. Atherosclerosis. Etiology and pathogenesis.
3. Symptoms of atherosclerosis depending of the location of the pathological process.
4. Ischemic heart disease, definition, etiology and pathogenesis.
5. Ischemic heart disease, classification.
6. Stable stenocardia: clinical features (complaints, physical examination). Functional classes in angina pectoris patients.
7. Stable stenocardia: laboratory and instrumental testing (ECG, stress testing (exercise and pharmacological), echocardiography, radionuclide imaging, coronary arteriography).
8. Stable stenocardia: the main principles of treatment and prophylaxis.

Practical skills:

1. Lipid profile test interpretation.
2. Examination of patients with stable stenocardia (clinical features).

Study 19
Acute coronary syndrome. Myocardial infarction. Principles of treatment

Control questions

1. Acute coronary syndrome (ACS): unstable angina and myocardial infarction, definition.
2. Myocardial infarction: definition, classification, etiology and pathogenesis.
3. Myocardial infarction: complaints, physical examination.
4. Clinical presentations of myocardial infarction (atypical symptoms).
5. Myocardial infarction: instrumental testing (ECG features, other instrumental methods).
6. Myocardial infarction: laboratory testing.
7. Myocardial infarction: complications and prognosis.
8. Principles of treatment and first aid. Cardiogenic shock.
9. The main principles of prophylaxis.

Practical skills:

1. ACS and myocardial infarction diagnosis, ECG features, laboratory testing.

Study 20
Acute and chronic heart failure. Principles of treatment.

Control questions

1. Heart failure: definition, classification, etiology and pathogenesis.
2. Acute left-sided (left ventricular) heart failure: etiology and pathogenesis, complaints, physical examination, instrumental testing.
3. First aid for patients with acute left-sided heart failure.
4. Acute left-sided (left atrial) heart failure: etiology and pathogenesis, complaints, physical examination, instrumental testing.
5. Acute right-sided heart failure: etiology and pathogenesis, complaints, physical examination, instrumental testing.
6. Chronic heart failure: definition, etiology and pathogenesis.
7. Chronic heart failure – classifications.
8. Chronic heart failure: complaints, physical examination.
9. Systolic and diastolic heart failure, clinical features.
10. Chronic heart failure. The main principles of treatment and prophylaxis.
11. Syncope, shock, etiology and pathogenesis.
12. Syncope: complaints, physical examination, first aid.
13. Shock: classification, complaints, physical examination, first aid.

Practical skills:

1. Examination of patients with heart failure.

Study 21

Mini-examination: cardiovascular system diseases.

Control questions

1. Main complaints of patients with diseases of cardiovascular system.
2. General inspection of patients with diseases of cardiovascular system.
3. Inspection and palpation of the apical impulse. Characteristics of the apical impulse.
4. Right ventricular impulse, palpation and characteristics, diagnostic meaning.
5. Diagnostic meaning of the “thrills”.
6. Surface projections of the heart and great vessels.
7. The border of the relative heart dullness in healthy person.
8. The border of the absolute heart dullness in healthy person.
9. Changes of the borders of the heart dullness in different cardiovascular diseases.
10. Different types of the configuration of the heart.
11. Projection of the valves on the anterior surface of the chest. Points of the valves auscultation.
12. Mechanism of formation of the first and second heart sounds. The differences between first and second heart sounds.
13. The third and forth heart sounds.
14. Changes of the heart sound loudness.
15. Split of the heart sounds.
16. The "opening snap". Mechanism of formation and diagnostic meaning.
17. Gallop rhythm. Mechanism of formation and diagnostic meaning.
18. Embryocardia. Mechanism of formation and diagnostic meaning.
19. Classification of the heart murmurs.
20. Etiology of the heart murmurs. Attributes of heart murmurs. The shape or configuration of murmurs. The grade of the murmurs.
21. The mechanism of origin of the organic systolic murmurs. Factors, influenced on the loudness of murmurs. Examples.
22. The mechanism of origin of the organic diastolic murmurs. Factors, influenced on the loudness of murmurs. Examples.
23. The mechanism of origin of the functional murmurs. The difference between organic and functional murmurs.
24. Pericardial friction rub, pleuropericardial friction murmurs.
25. Arterial pulse. Pulse palpation.
26. Qualities of pulse and their characteristic (rate, rhythm, tension, volume, amplitude and contour of the pulse wave).
27. Methods of the vessels examination (angiography, ultrasound, pulse wave velocity).
28. Methods of blood pressure (BP) measurement. Korotkoff Sounds. The technique of blood pressure measurement (Korotkoff method).
29. Normal ranges for the blood pressure in adult humans.
30. Syndromes of the arterial insufficiency, acute and chronic.
31. Syndromes of the venous and lymphatic insufficiency, acute and chronic.
32. The cardiac conduction system.
33. The electrocardiogram equipment and ECG registration technique. ECG leads.
34. ECG waves, intervals and segments. What does each wave on an ECG represent?
35. ECG axis interpretation. The plan of the ECG interpretation.
36. ECG features of the right and left atrial hypertrophy, the right and left ventricular hypertrophy.
37. Classification of arrhythmias. Mechanisms of appearance of arrhythmias.
38. Disorders of automaticity of sinus node: sinus tachycardia, sinus bradycardia, sinus arrhythmia, sinus node disease (sick sinus syndrome), causes, clinical characteristics and ECG features.
39. Ectopic rhythms, which are not connected with disorders of automaticity: extrasystoles (atrial, AV node, ventricular), paroxysmal tachycardia (atrial, AV node, ventricular), causes, clinical characteristics and ECG features.
40. Paroxysmal tachycardia (supraventricular and ventricular), causes, clinical characteristics and ECG features.

41. Disorders of impulse conduction**: s**inoatrial block, intraatril block, atrioventricular block (I, II, III degree), left bundle branches block (LBBB) and right bundle branches block (RBBB), clinical characteristics and ECG features.

42. Atrial flutter and fibrillation, ventricular flutter and fibrillation, clinical characteristics and ECG features.

43. Ventricular flutter and fibrillation, clinical characteristics and ECG features. First aid in ventricular fibrillation. Definition of the electrical cardioversion.

44. Rheumatic fever: definition, etiology and pathogenesis, clinical features (complaints, physical examination – the Jones criteria for diagnosis of rheumatic fever). Laboratory and instrumental testing. Principles of treatment and prophylaxis.

45. Mitral regurgitation: definition, causes, changes of hemodynamics due to the mitral regurgitation. Complaints, physical examination, laboratory and instrumental testing (ECG, Echocardiography, X-ray). Principles of treatment and prophylaxis.

46. Mitral Stenosis: definition, causes, changes of hemodynamics due to the mitral stenosis. Complaints, physical examination, laboratory and instrumental testing (ECG, Echocardiography, X-ray). Principles of treatment and prophylaxis.

47. Aortic regurgitation: definition, causes, changes of hemodynamics due to the aortic regurgitation. Complaints, physical examination, laboratory and instrumental testing (ECG, Echocardiography, X-ray). Principles of treatment and prophylaxis.

48. Aortic stenosis: definition, causes, changes of hemodynamics due to aortic stenosis. Complaints, physical examination, laboratory and instrumental testing (ECG, Echocardiography, X-ray). Principles of treatment and prophylaxis.

49. Infective endocarditis: definition, etiology and pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.

50. Myocarditis: etiology and pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.

51. Arterial hypertension, etiology and pathogenesis, classification, clinical features (complaints, physical examination, laboratory and instrumental testing). Complications. The main principles of the treatment and prophylaxis of the arterial hypertension.

52. Hypertensive crisis: definition, complaints, physical examination, first aid.

53. Stable stenocardia: definition, classification, clinical features (complaints, physical examination). Laboratory and instrumental testing. First aid.

54. ACS and myocardial infarction diagnosis, ECG features, laboratory testing.

55. Q-wave myocardial infarction. Definition, classification, clinical features (complaints, physical examination). Laboratory and instrumental testing. First aid.

56. Acute left-sided heart failure: etiology and pathogenesis, complaints, physical examination, instrumental testing. First aid.

57. Acute right-sided heart failure: etiology and pathogenesis, complaints, physical examination, instrumental testing. First aid.

58. Chronic heart failure: definition, etiology and pathogenesis, classification, clinical features (complaints, physical examination). Laboratory and instrumental testing. Principles of treatment and prophylaxis.

59. Syncope: complaints, physical examination, first aid.

60. Shock: classification, complaints, physical examination, first aid.

Practical skills:

1. History taking and inspection of patients with cardiovascular system diseases.
2. Inspection and palpation of the heart area.
3. Technique of the heart percussion (relative heart dullness, absolute heart dullness).
4. Heart auscultation.
5. Palpation of the vessels.
6. Pulse palpation.
7. Blood pressure measurement.
8. ECG recording.
9. ECG interpretation.

Part II

Study 22

Main complaints of patients with gastrointestinal tract diseases. Inspection, percussion and auscultation of the abdomen. Palpation of the abdomen.

Control questions

1. Main complaints of patients with diseases of the esophagus, stomach and intestine.
2. *Examination of the oral cavity* and abdomen. **Abdominal surface anatomy (lines and quadrants). A**bdominal circumference *measurement.*
3. Distinctive signs of abdominal distension (ascites, flatus and obesity).
4. Method of percussion and auscultation of the abdomen. The main sounds, determination of the ascites.
5. Palpation of the abdomen: methods and techniques.
6. Types of palpation of the abdominal organs.
7. Interpretation of the results of palpation.

Practical skills:

1. Main complaints of patients with gastrointestinal tract diseases.
2. Technique of examination of patients with gastrointestinal tract diseases (percussion and abdominal auscultation).
3. Technique of superficial palpation of the abdomen.
4. Technique of deep palpation of the abdomen.

Study 23

Laboratory and instrumental testing of patients with gastrointestinal tract diseases. Principles of treatment and prophylaxis of gastroesophageal reflux disease (GERD)

Control questions

1. *Esophageal pH monitoring*, diagnostic value. Indications and contraindications.
2. *Methods for detection of Helicobacter pylori*.
3. Stool test: collection, macro - and microscopic characteristics, diagnostic meaning.
4. Instrumental testing: ultrasound method, diagnostic meaning. Indications and contraindications.
5. Instrumental testing: endoscopy (fibrogastroduodenoscopy, rectoromanoscopy, colonoscopy, enteroscopy). Diagnostic meaning. Indications and contraindications.
6. Biopsy of the esophagus, stomach, intestine.
7. Instrumental testing: radiological (gastric examination, irrigoscopy), CT, MRI, laparoscopy. Indications, contraindications. GERD.
8. Etiology, pathogenesis, complaints, physical examination, laboratory and instrumental testing. Esophageal pH-monitoring for the diagnosis of GERD. The main principles of treatment and prophylaxis.

Practical skills:

1 pH-monitoring.
2 Interpretation of the stool analysis.
3. Interpretation of instrumental testing of patients with gastrointestinal tract diseases.

Study 24

Laboratory and instrumental testing. Principles of treatment and prophylaxis of gastritis, gastric and duodenal ulcers, gastric cancer. functional dyspepsia. Gastrointestinal bleeding.

Control questions

1. Syndrome of dyspepsia.
2. Acute gastritis: definition, classification.
3. Acute gastritis: etiology, clinical features (complaints, laboratory and instrumental testing).
4. Chronic gastritis: definition, classification. Laboratory and instrumental testing of gastritis.

5. Chronic atrophic gastritis. Etiology, pathogenesis, complaints, laboratory and instrumental testing. Principles of treatment and prophylaxis.

6. Chronic non-atrophic gastritis. Etiology, pathogenesis, complaints, physical examination, laboratory and instrumental testing. The role of Helicobacter pylori. Principles of treatment and prophylaxis.

7. Types of chronic gastritis.

8. Gastric and duodenal ulcer. Etiology, pathogenesis, complaints, physical examination, laboratory and instrumental testing.

9. Complications of ulcers. First aid for gastrointestinal bleeding.

10. Stomach cancer. Etiology, pathogenesis, complaints, physical examination, laboratory and instrumental testing. Endoscopy.

11. Symptomatology and examination of patients with advanced stage of gastric cancer.

Practical skills:

1. Interpretation of pH-monitoring.
2. Interpretation of instrumental testing of patients with diseases of the stomach and duodenum.
3. Examination of patients with chronic gastritis, gastric and duodenal ulcer.

Study 25
The main syndromes of intestinal diseases. Laboratory and instrumental testing, principles of treatment and prophylaxis of the diseases of intestine and pancreas.

Control questions

1. Maldigestion: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
2. Malabsorption: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
3. Diarrhea: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
4. Bacterial overgrowth syndrome.
5. Irritable bowel syndrome: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
6. The concept of celiac enteropathy.
7. Chronic colitis: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
8. Crohn's disease: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
9. Ulcerative colitis: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
10. Chronic pancreatitis: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.

Practical skills:

1. Interpretation of stool analysis.
2. Interpretation of biochemical blood tests.
3. Interpretation of instrumental testing data of patients with diseases of intestine and pancreas.

Study 26
Complaints and examination of patients with liver and biliary tract diseases. The main syndromes

Control questions

1. Main complaints of patients with hepatobiliary system diseases.
2. Physical examination of patient, inspection of the mouth and abdomen.
3. Technique of percussion and palpation of the liver and spleen.

4. Laboratory testing of the liver and biliary tract diseases. Biochemical blood test: bilirubin, transaminases, alkaline phosphatase, lactate dehydrogenase, proteinogram, albumin-globulin ratio, prothrombin test, fibrinogen, lipid profile.

5. Liver function tests intrpretation.

7. Instrumental testing (ultrasound, endoscopic, X-ray, liver scintigraphy, liver biopsy, FibroMax test, CT, MRI).

8. Jaundice syndrome.

9. Portal hypertension syndrome.

10. Edema syndrome. Ascites.

11. Hepatolienal, hemorrhagic syndromes.

12. *Symptoms of hepatic failure*: biliary dyspepsia, hepatocyte cytolysis, inflammation, hyperestrogenemia, asthenic symptoms.

Practical skills:

1. Technique of percussion and palpation of the liver and spleen.
2. Technique of ascites determination.
3. Laboratory and instrumental testing of diseases of hepatobiliary system.

Study 27
Laboratory and instrumental testing. The main principles of treatment and prophylaxis of chronic hepatitis, liver cirrhosis, chronic cholecystitis and cholelithiasis

Control questions

1. Chronic hepatitis. Definition, etiology and pathogenesis.
2. Classification of chronic hepatitis.
3. Chronic hepatitis: causes, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
4. Liver cirrhosis. Definition, etiology and pathogenesis.
5. Classification of liver cirrhosis.
6. Liver cirrhosis: clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
7. Chronic liver failure: causes, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
8. Chronic cholecystitis: causes, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
9. Cholelithiasis: causes, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.

Practical skills:

1. Technique of percussion and palpation of patients with cholecystitis.
2. Laboratory and instrumental testing of hepatitis, liver cirrhosis, cholecystitis.

Study 28
MINI-EXAMINATION
GASTROINTESTINAL TRACT DISIEASES

1. Main complaints of patients with diseases of esophagus, stomach and intestines.
2. *Examination of the oral cavity* and abdomen. **Abdominal surface anatomy (lines and quadrants). A**bdominal circumference *measurement.*
3. Distinctive signs of abdominal distension (ascites, flatus and obesity).
4. Method of percussion and auscultation of the abdomen. The main sounds, determination of the ascites.
5. Palpation of the abdomen: methods and techniques.
6. Types of palpation of the abdominal organs.
7. Interpretation of the results of palpation.
8. Esophageal pH-monitoring, diagnostic value. Indications and contraindications.
9. *Methods for detection of Helicobacter pylori*.

10. Stool test: collection, macro - and microscopic characteristics, diagnostic meaning.
11. Instrumental testing: ultrasound method, diagnostic meaning. Indications and contraindications.
12. Instrumental testing: endoscopy (fibrogastroduodenoscopy, rectoromanoscopy, colonoscopy, enteroscopy). Diagnostic meaning. Indications and contraindications.
13. Biopsy of the esophagus, stomach, intestine.
14. Instrumental testing: radiological (gastric examination, irrigoscopy), CT, MRI, laparoscopy. Indications, contraindications. GERD.
15. Etiology, pathogenesis, complaints, physical examination, laboratory and instrumental testing. Esophageal pH-monitoring for the diagnosis of GERD. The main principles of treatment and prophylaxis.
16. Syndrome of dyspepsia.
17. Acute gastritis: definition, classification, etiology, clinical features (complaints, laboratory and instrumental testing).
18. Chronic gastritis: definition, classification. Etiology, pathogenesis, complaints, laboratory and instrumental testing. Principles of treatment and prophylaxis.
19. Chronic atrophic gastritis. etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
20. Chronic non-atrophic gastritis. Etiology, pathogenesis, complaints, physical examination, laboratory and instrumental testing. The role of Helicobacter pylori. Principles of treatment and prophylaxis.
21. Diagnostic signs of chronic reflux gastritis.
22. Peptic gastric and duodenal ulcers: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
23. Complications of ulcers.
24. Stomach cancer. etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
25. Maldigestion: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
26. Malabsorption syndrome: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
27. Diarrhea syndrome.
28. Irritable bowel syndrome: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
29. Classification of the intestinal diseases.
30. Chronic colitis: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
31. Chronic pancreatitis: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
32. Main complaints of patients with hepatobiliary system diseases.
33. Physical examination of patient, inspection of the mouth and abdomen.
34. Jaundice syndrome: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
35. Main syndromes of the liver and biliary tract diseases (pain, portal hypertension, edematous, hepatolienal, hemorrhagic, hepatocellular insufficiency, dyspeptic, cytolysis of hepatocytes).
36. Laboratory and instrumental testing of the liver and biliary tract diseases.
37. Chronic hepatitis: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
38. Cirrhosis of the liver: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
39. Chronic cholecystitis: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
40. Cholelithiasis: etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.

Practical skills:

1. Examination of patients with digestive system and hepatobiliary system diseases.
2. Superficial and deep palpation of the abdomen.
3. Palpation and percussion of the liver and spleen.

4. Laboratory and instrumental testing of patients with digestive and hepatobiliary system diseases.

Study 29
The main complaints of patients with kidney and urinary tract diseases. Laboratory and instrumental testing. Main syndromes

Control questions

1. Main complaints of patients with urinary tract diseases. Etiology, pathogenesis. History of the present illness.
2. General inspection of patients with urinary tract diseases (main symptoms).
3. Percussion and palpation of the kidneys and urinary bladder. Pasternatsky symptom. Diagnostic value.
4. The technique of renal arteries auscultation.
5. Urine collection for analysis.
6. Urine analysis interpretation (color, transparency, odor, density). *Diagnostic value*.
7. Urine analysis interpretation: pH, protein, glucose, ketones, bilirubin, urobilinogen. Diagnostic value.
8. Microscopic examination of the urine analysis (epithelial cells, leukocytes, erythrocytes, cylinders, salts). Diagnostic value.
9. The Nechiporenko urine analysis.
10. The Zimnitsky functional test.
11. Methods for determining glomerular filtration rate: Reberg test; calculation according to the Cockroft-Gault formula and according to the formula of the International Multicenter Renal Disease Study (MDRD). Modern formulas.
12. Biochemical blood tests in diseases of the urinary tract. Diagnostic value.
13. Instrumental methods of investigation: X-ray, ultrasound, angiographic, biopsy of the kidneys.
14. Pain syndrome.
15. “Urinary” syndrome.
16. Syndrome of arterial hypertension.
17. Edema syndrome.
18. Nephrotic syndrome.

Practical skills:

1. Methods and techniques of palpation of the kidneys and urinary bladder.
2. Evaluation of clinical analyses of urine, functional kidney tests, biochemical blood tests of patients with diseases of urinary system.

Study 30
Diagnosis, principles of treatment of acute and chronic glomerulonephritis, pyelonephritis, acute kidney injury and chronic kidney disease

Control questions

1. Classification of nephritis.
2. Acute glomerulonephritis: etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
3. Chronic glomerulonephritis: etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
4. Chronic pyelonephritis: etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
5. Acute kidney injury etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
6. Chronic kidney disease: etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.

Practical skills:

1. Diagnostic criteria of the acute glomerulonephritis.

2. Diagnostic criteria of the chronic glomerulonephritis.
3. Diagnostic criteria of the chronic pyelonephritis.
4. Diagnostic criteria of the acute kidney injury.
5. Diagnostic criteria of the chronic kidney disease.

Study № 31
Main complaints of patients with diseases of the hematopoietic system. Diagnosis, principles of treatment of anemia, bleeding disorders. The concept of leukemia

Control questions

1. Main complaints of patients with diseases of the blood *disorders.*
2. General inspection. Palpation of lymph nodes, spleen palpation and percussion. Diagnostic value.
3. Haematopoiesis. Blood test.
4. The concept of bone marrow puncture, lymph nodes puncture, trepanobiopsy.
5. Anemia. Definition and classification.
6. Acute blood loss anemia. Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
7. Iron deficiency anemia. Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
8. B12-deficiency anemia. Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
9. The concept of leukemia. Classification.
10. Acute leukemia. Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
11. Chronic myeloid leukemia. Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
12. Differential diagnosis between acute and chronic myeloid leukemia according to the blood test.
13. Chronic lymphoid leukemia. Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
14. Determination of the hemostasis *system* pathology.
15. Hemostasiopathy. Definition, etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
16. Verlgof's disease and vasculitis. Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.

Practical skills:

1. Technique of percussion and palpation of the spleen, palpation of lymph nodes.
2. Interpretation of a blood test.
4. Interpretation of hemostasiogram.

Study №32
Main complaints of patients with diseases of the endocrine system. Diagnosis, principles of treatment of diseases of the thyroid gland, diabetes mellitus, obesity

Control questions

1. Main complaints of patients with endocrine system disorders
2. Palpation of the thyroid gland.
3. Laboratory testing: determination of thyroid hormones in blood.
4. Instrumental testing of the thyroid gland.
5. Laboratory testing: diagnostic criteria for disorders of glucose metabolism. Glucose tolerance test.
6. Determination of glycated hemoglobin.
7. Hyperthyroidism (diffuse toxic goiter). Definition, etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
8. Hypothyroidism. Definition, etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.

9. Diabetes mellitus. Definition, etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.

11. Diagnostics and emergency medical care for hyperglycemic (ketoacidotic) and hypoglycemic coma.

12. Obesity: definition, etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.

Practical skills:

1. Diagnostic criteria for diabetes mellitus.
2. Diagnostic criteria for obesity.
3. Diagnostic criteria for thyroid disease.

Study №33

Examination of patients with diseases of joints. Diagnosis, principles treatment. Guidelines for rheumatoid arthritis, reactive arthritis and osteoarthritis diagnosis. The concept of gout

Control questions

1. Articular syndrome. Etiology, pathogenesis. Complaints, physical examination, laboratory and instrumental testing.
2. A synovial joint fluid analysis.
3. Rheumatoid arthritis. Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
4. Osteoarthritis. Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
5. Gout. Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
6. Reactive arthritis. Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.

Practical skills:

1. Methods of examination of patients with diseases of the joints.
2. Differential diagnosis of rheumatoid arthritis, osteoarthritis, reactive arthritis and gout.

Study №34

Diagnosis, principles of treatment of acute allergic diseases. Anaphylaxis: emergency treatment

Control questions

1. Allergy testing: methods, types of tests, purposes, results.
2. Urticaria. Definition. Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
3. Angioedema (angioedema). Definition Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
4. Pollinosis. Definition. Etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
5. Anaphylactic shock: etiology, pathogenesis, classification. Complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.
6. Emergency care for anaphylactic shock.

Practical skills:

1. Technique and method of *cardiopulmonary resuscitation*.

Study №35

Collection of data and writing a case report

Control questions:

1. Plan the examination of the patient.
2. Subjective data collection.
3. Objective data collection. Patient’s examination.
4. Case report writing.

Practical skills:

1. Subjective and objective examination of patients with various internal diseases
2. Analysis of data of laboratory and instrumental testing.
3. Conclusion about clinical diagnosis, principles of treatment.