Ministry of Health of the Republic of Belarus

Educational Establishment

«Vitebsk State Order of Peoples` Friendship Medical University»

Chair of Propedeutics of Internal Diseases

It predicated on meeting

of the chair from

Protocol № \_\_ "\_\_\_" \_\_\_\_\_\_\_\_\_20\_\_\_yr

**METHODOLOGICAL RECOMMENDATIONS FOR LEARNERS N12**

for practical training

on Propaedeutics of Internal Diseases

for specialty 7-07-0911-01 “General Medicine”

2nd year of medical faculty

full-time higher education

**Theme:** Curation of patients with diseases of the respiratory system, thyroid gland, lymph nodes, musculoskeletal system (Concluding Lesson).

**Time:** 3 hours

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Vitebsk, 2025

**Motivational characteristics of the need to study the topic of the class**

Students' knowledge of previously studied methods of examining respiratory system organs is necessary for a doctor of any specialty to make a diagnosis and prescribe competent treatment.

**Aims and objectives of the class**

*Learning objectives:* consolidation of previously covered learning material.

*Developmental objectives:* development of attentiveness, observation, independence in students (in preparation for the final lesson).

*Educational objectives:* adherence to responsibility, diligence, accuracy, and conscientiousness in preparation for the final lesson.

During the study of the topic, the student must

**work out:**

- practical skills in examining patients with diseases of the circulatory system.

**Practical skills formed during the study of the topic:**

1. General survey of a patient: technique, diagnostic value.
2. Constitution (body build type): technique of assessment, diagnostic value.
3. Examination of the skin and visible mucous membranes, the musculoskeletal system: technique, diagnostic value.
4. Examination of regional lymph nodes: technique, diagnostic value.
5. Examination of the thyroid gland: technique, diagnostic value.
6. Static survey of the chest: technique, diagnostic value.
7. Dynamic survey of the chest: technique, diagnostic value.
8. Palpation of the chest: technique, diagnostic value.
9. Comparative percussion of lungs: technique, diagnostic value.
10. Topographical percussion of the lungs: technique of the height of the lung apex, the width of Kroenig's areas: technique, diagnostic value.
11. Topographical percussion of the lungs: technique of delimitation of the inferior border of the lung, diagnostic value.
12. Topographical percussion of the lungs: technique of determination of the active respiratory mobility of the inferior border of the lung, diagnostic value.
13. Auscultation of lungs: the rules and technique, diagnostic value.
14. Bronchophony: definition, technique, diagnostic value.

**Material equipment.**

1. Phonendoscopes.

2. Set of training Spirometry.

**Interdisciplinary and intradisciplinary links**

The final assessment of knowledge (practical and theoretical) is necessary to prepare for the disciplines in the following departments: Department of Faculty Therapy and Cardiology with a course of advanced training and vocational training, Department of General Medical Practice, Department of Phthisiopulmonology with a course of advanced training and vocational training.

**Theoretical part**

In preparation for the lessons learners should pay attention to:

- “Methodological guidelines for the organization of independent work of learners”;

- information block of the lesson topic on the SIW (supervised independent work of learners) in the theoretical section of the course.

**Practical part:** when preparing for the lesson, pay attention to the information block of the SIW and the attached literature, training videos presented in the theoretical section on the course SIW.

**Control question on the theme of the lesson:**

**I. FOR PRACTICAL SKILLS**

1. General examination of the patient with diseases of internal organs.

2. Examination of the skin and visible mucous membranes. Diagnostic value.

3. Palpation of the thyroid gland. Diagnostic value.

4. Palpation of lymph nodes. Diagnostic value.

5. Examination of patients with diseases of the musculoskeletal system: examination of the degree of muscle development, determination of muscle strength, detection of changes in the shape of the bones, the presence of deformity, pain, determination of defiguration and deformity of joints, determination of active and passive mobility of joints. Diagnostic value.

6. Examination of the chest: technique of static and dynamic survey. Diagnostic value.

7. Palpation of the chest: a technique for determining local pain, regidity (elasticity), voice tremour (fremitus perctoralis). Diagnostic value.

8. Comparative percussion: rules, technique. Diagnostic value.

9. Topographic percussion: the technique for determining of the height of the lung apex, the width of the lung apex (Kroenig’s area). Diagnostic value.

10. Topographic percussion: the technique for determining the inferior borders of the lung. Diagnostic value.

11. Topographic percussion: a technique for determining the active mobility of the inferior border of the lungs. Diagnostic value.

12. Lung auscultation: technique and rules of lung auscultation. Diagnostic value.

13. Bronchophony examination: technique and rules of carrying out. Diagnostic value.

14. Interpretation of general sputum analysis. Diagnostic value.

15. Interpretation of pleural content analysis. Diagnostic value.

16. Interpretation of spirogram. Diagnostic value.

**II. FOR THE THEORETICAL INTERVIEW**

1. Medical ethics and deontology.

2. Methods of clinical examination of patients with diseases of internal organs (subjective, objective, laboratory and instrumental).

3. Laboratory methods of investigation. General idea about the laboratory methods of investigation, their importance in diseases of the internal organs.

4. Instrumental methods of research. A general idea of the instrumental methods of research, their importance in diseases of the internal organs. Basic types of X-ray method of examination. Diagnostic significance. Endoscopic methods of research. Biopsy of organs. General idea of the diagnostic value of histological and cytological study. Ultrasound methods of research in diseases of internal organs, significance for diagnosis.

5. Radioisotope methods of research in diseases of internal organs.

6. Magnetoresonance methods of research in diseases of the internal organs.

7. Functional methods of research in diseases of internal organs (electrocardiography, daily ECG monitoring, spirography, etc.).

8. Subjective method of examination of the patient. Questioning scheme: passport data, complaints and their details, history of present disease and life history.

9. Method of collecting the patient's complaints (basic, anamnesis communis) with the disease of internal organs. Diagnostic value.

10. The technique of collecting the anamnesis morbi in patients with diseases of internal organs. Diagnostic value.

11. Technique of life history collection (anamnesis vitae) in patients with diseases of internal organs. Diagnostic value.

12. Outline of the medical history. The importance of competent record keeping of an inpatient chart as a medical, legal, and also a document that can be used for scientific purposes.

13. Assessment of the general condition of the patient: types, assessment criteria.

14. Levels of impairment of consciousness. Diagnostic value.

15. Patient positioning. Types. Diagnostic value.

16. Telosculature. Evaluation of constitutional type of physique. Diagnostic value.

17. Examination of the face. Diagnostic value.

18. Evaluation of the condition of the skin and visible mucous membranes. Distinction of true jaundice from false jaundice. Cyanosis: types of cyanosis. Degree of subcutaneous fatty tissue. Diagnostic value.

19. Evaluation of the hair cover, examination of the nails. Diagnostic value.

20. Edema: localization, prevalence, severity. Methods of detection. Difference between renal edema and cardiac edema.

21. Body temperature. Methods of measurement. Types of temperature curves.

22. Subjective method of examination of patients with thyroid diseases: complaints, features of medical history, life history. Diagnostic value.

23. Objective method of examination of patients with thyroid diseases: general and local examination. Palpation of the thyroid gland. Degrees of enlargement of the thyroid gland by WHO. Diagnostic value.

24. Subjective method of examination of patients with lymph node disease: complaints, features of medical history, life history. Diagnostic value.

25. Objective method of examination of patients with lymph node disease: general and local examination. Palpation of lymph nodes. The concept of lymphoadenitis and lymphoadenopathy. Diagnostic value.

26. Subjective method of examination of patients with diseases of the musculoskeletal system: complaints, peculiarities of the anamnesis of the disease, anamnesis of life. Diagnostic value.

27. Objective method of examination of patients with diseases of the musculoskeletal system: general and local examination. Examination of the degree of muscle development, determination of muscle strength. Detection of changes in the shape of the bones, the presence of deformity, painfulness. Determination of the deflexion and deformity of the joints. Determination of active and passive mobility. Diagnostic value.

28. Laboratory methods of examination in diseases of the thyroid gland, lymph nodes and the musculoskeletal system. Diagnostic value.

29. Instrumental methods of research in diseases of the thyroid gland, lymph nodes and musculoskeletal system. Ultrasound examination of the thyroid gland, fine needle puncture biopsy of the thyroid gland and lymph nodes. X-ray and magnetic resonance imaging study of joints. Arthroscopy. Diagnostic value of instrumental methods of research.

30. Complaints of patients in respiratory diseases. Diagnostic value.

31. Anamnesis of disease, anamnesis of life in diseases of the respiratory organs. Diagnostic value.

32. General examination of patients in diseases of the respiratory system. Diagnostic value.

33. Static examination of the chest: objectives, methods of determining the shape of the chest, detection of pathological changes. Diagnostic value.

34. Dynamic examination of the thorax: objectives, methods of studying the excursion of the thorax, methods of determining the type of breathing, symmetry of respiratory movements, participation in breathing of the auxiliary musculature. Diagnostic value.

35. Types of dyspnea, pathological types of breathing (Kussmaul, Cheyne-Stokes, Biota, etc.). Diagnostic value.

36. Palpation of the thorax: goals, methods of determining local soreness, elasticity and reticence of the thorax. Study of vocal trembling in symmetrical areas. Diagnostic value.

37. Percussion as a method of investigation. Types of percussion. Rules of percussion. The strength of percussion depending on the purpose of percussion.

38. Identifying vertical and horizontal lines of the chest.

39. Comparative percussion: goals, rules, technique. Character of percussion sound in norm and pathology. Diagnostic value.

40. Topographic percussion: goals and rules.

41. Technique for determining the upper boundaries of the lungs (height of the apices in front and behind, width of the Crenig's fields). Diagnostic value.

42. Methods of determining the lower boundaries of the lungs, active mobility of the lower edge of the lungs. Diagnostic value.

43. Lung auscultation as a method of investigation. Methods and rules of lung auscultation. The concept of the main and additional respiratory noises.

44. Vesicular breathing: mechanism of occurrence, auscultatory features. Auscultation points. Qualitative and quantitative changes in vesicular breathing. Diagnostic value.

45. Bronchial breathing: mechanism of occurrence, auscultatory features. Auscultation points of bronchial breathing. Conditions of bronchial breathing occurrence over the lungs. Types of pathological bronchial breathing. Diagnostic significance of appearance of pathologic bronchial breathing.

46. Bronchophony as a method of investigation. Technique and rules of carrying out. Diagnostic value.

47. Additive breath sounds: classification.

48. Rales: mechanism of dry and wet rales, peculiarities of the auscultatory picture. The diagnostic value.

49. Crepitations: the mechanism of formation, features auscultatory picture. The diagnostic value.

49. pleural murmur: the mechanism of formation, features auscultatory picture. The diagnostic value.

51. Syndrome of bronchial permeability.

52. Syndrome of increased airiness of pulmonary tissue.

53. Syndrome of thickening of the pleural sheets.

54. Chronic pulmonary heart syndrome.

55. Syndrome of thickening of the pulmonary tissue.

56. Syndrome of the formation of a cavity in the lung.

57. Syndrome of atelectasis (obturation and compression).

58. Syndrome of fluid accumulation in the pleural cavity.

59. Syndrome of air accumulation in the pleural cavity (pneumothorax).

60. Respiratory failure syndrome.

61. Examination of sputum: physical properties of sputum, microscopy (cellular elements, fibers, crystal structures). Bacterioscopy of sputum. Bacteriological culture. Diagnostic value.

62. Examination of pleural contents: examination of physical and chemical properties, microscopy for cellular elements.

63. General and biochemical analysis of blood in diseases of the respiratory organs. Diagnostic significance.

64. Instrumental methods of research in respiratory diseases (radiological, endoscopic, functional, etc.). Diagnostic value

**Questions for supervised independent work (SIW).**

*SIW is not applicable*

**Assignments for supervised independent work (SIW).**

*SIW is not applicable*

**Deadline for completion of supervised independent work (SIW).**

*SIW is not applicable*

**Forms of control of supervised independent work (SIW).**

*SIW is not applicable*

**Literature**

**Basic:**

1. Немцов, Л.М. Пропедевтика внутренних болезней = Propaedeutics of Internal Diseases: в 2 ч. : учеб. пособие : для иностр. студентов учреждений высш. образования по специальности «Лечебное дело». Ч. 1 : Обследование органов дыхания и сердечно-сосудистой системы / Л. М. Немцов. - Витебск: ВГМУ, 2021. - 309 с. – 154 экз.

**Additional:**

1. Немцов Л.М. General propedeutics of internal diseases: Lecture course (Общая пропедевтика внутренних болезней: Курс лекций (на английском языке), 2-е издание / Л.М. Немцов. – Витебск: ВГМУ, 2016. – 175 с. – 310 экз.
2. Current Medical Diagnosis & Treatment / edited by Maxine A. Papadakis, Stephen J. McPhee, Michael W. Rabow ; associate ed. Kenneth R. McQuaid. - 61st ed. - New York [etc.] : McGraw-Hill, 2022. -– 1840 pp. – 1 экз.

4. Доценко, Э.А. Методы исследования в клинике внутренних болезней = Diagnostic methods in the internal medicine : практикум для студентов стоматол. фак. на англ. яз. / Э. А. Доценко [и др.] ; М-во здравоохранения Республики Беларусь, Белорус. гос. мед. ун-т, Каф. пропедевтики внутрен. болезней. - 2-е изд. - Минск: БГМУ, 2023. – 73 с. – 1 экз