1. Major symptoms and signs of respiratory diseases (cough, sputum production, hemoptysis, dyspnea, wheeze, stridor, chest pain, snoring, daytime sleepiness etc.): variations and combinations with respective clinical interpretation.

2. Physical examination of the pulmonary patient. Variants of the findings on inspection, palpation, percussion, and auscultation of the chest and links to different respective respiratory diseases and clinical conditions. The significance of extrapulmonary signs and symptoms.


4. Pulmonary radiological diagnostics: roentgenoscopy of the chest; chest X-ray, most widely used projections. Computed tomography (CT) of the chest, high-resolution CT (HRCT), CT with use of contrast media, CT-angiography; magnetic resonance imaging (MRI), positron emission tomography (PET), and single photon emission computed tomography (SPECT): indications and the diagnostic value in pulmonary medicine.


6. Biochemical and immunological mechanisms of defense in the lower respiratory tract (in the conducting airways and at the alveolar level), the innate and acquired immunity.

7. Bronchial asthma: definition and nature of the disease, pathogenesis of asthma.

8. Asthma: basics on epidemiology. Risk factors and clinical signs and symptoms of asthma. Diagnostic criteria and practical diagnosis of asthma in different clinical settings and in patients with various degrees of severity of asthma.

9. Classification of asthma: degrees of severity and clinically significant phenotypes of asthma. Differential diagnosis of asthma; differentiation of asthma from chronic obstructive pulmonary disease (COPD) and asthma and COPD overlap syndrome (ACOS).
10. Goals of treatment in asthma. Principles of treatment of stable asthma. Asthma medicines that are in use: applied classification. Practical treatment of asthma at different degrees of severity, as well as according to the clinical phenotypes. Guidance of the management of asthma.


12. Chronic obstructive pulmonary disease (COPD): the nature of the disease, its epidemiology with current trends. Etiology, risk factors, and pathogenetic mechanisms of COPD. The two main substrates of COPD: emphysema and „small airway disease“ (in „airway-type COPD“), their nature and mechanisms of fixed airway obstruction and gas exchange disturbances in these conditions.

13. Clinical COPD: symptoms, signs, appearance, and course of the disease. Difference between „airway-type COPD“ and emphysema-based COPD. The diagnosis and differential diagnosis of COPD.

14. The goals and principles of the present-day treatment of COPD. The medicines used for treatment of COPD. Rehabilitation in chronic respiratory diseases (the essence of pulmonary rehabilitation (PR), components, methods, and goals of PR; assessment of the patient in association with PR)). The significance of smoking cessation in medicine; possibilities and means of smoking cessation.

15. Exacerbations of COPD: more frequent reasons, symptoms and signs; assessment of severity, criteria for hospitalization, and management, both in outpatient and hospital settings.


18. Pneumonias: definition and principles of classification. Etiology in general; etiology in the context of clinical-demographic properties of the patient, as well as with the type of pneumonia. Pathogenesis of pneumonia.


22. Assessment of adequacy of the response to treatment in pneumonia; non-responding and slowly responding pneumonia; management of the non-responding pneumonia.

23. Atypical pneumonias: the nature, etiology, and peculiarities in terms of clinical presentation, course, and management.


25. Pleural empyema, lung abscess, and pyopneumothorax as major complications of pneumonia: mechanisms, etiology, diagnosis, course, and principles of management.


27. Respiratory manifestations of cystic fibrosis (CF): diagnosis and course of the disease. Contemporary principles of management.

28. Pleural effusions: the major mechanisms of accumulation of the fluid in the pleural cavities, involvement of particular mechanisms in various diseases that may affect the pleura or that can be characterized by accumulation of the fluid. Clinical signs and symptoms that derive from the presence of pleural effusions. Diagnostic goals, methods, and strategies in patients with pleural effusions. Pleurisy. Classification of the pleural effusions, criteria for distinguishing between transudates and exsudates, clinical significance of pleural effusions with various parameters. Indications and methods for pleurodesis.

29. Pleural mesothelioma: clinical presentation, diagnosis, and principles of management.


31. Lung cancer: clinical signs and symptoms (rising from the growth of the primary tumor, from the spread of the tumor, and from secondary changes occurring in the tumor); major paraneoplastic syndromes.

33. Lung cancer: principles and possibilities of treatment according to the histopathological types and stages. Non-small cell lung cancer (NSCLC) and small cell lung cancer (SCLC): differences with regard to biological properties, assessment of spread, and treatment. Prognosis of lung cancer by the histopathological types and stages.

34. Pulmonary embolism. Classification. Pulmonary thromboembolism (PE): risk factors and pathophysiology. Deep venous thrombosis (DVT) and PE. Clinical presentation, diagnostic methods, and ancillary investigations in PE. Diagnostic algorithm of PE. Assessment of probability of PE and confirmation of the diagnosis.

35. Classification of PE according to its clinical severity and risks to the patient, risk assessment-based approach to the patient management. Methods of treatment of PE, practical management and prognosis of PE.

36. Pulmonary hypertension (PH): the nature of this group of conditions, classification, core clinical presentations. Causes of PH by the valid classification. Pulmonary arterial hypertension (PAH): sub-classification according to the etiology. The diagnostic work-up (diagnostic algorithm), methods of assessment of the patient and response to treatment, principles of contemporary management, and prognosis of PAH. Chronic thromboembolic pulmonary hypertension (CTEPH).

37. Interstitial lung diseases (resp. diffuse parenchymal lung diseases): the essence and classification; groups of the diseases that are included in this major group.

38. Idiopathic interstitial pneumonias (IIP): members of this group. Idiopathic pulmonary fibrosis (IPF): the essence, clinical presentation, diagnosis, differential diagnosis, and current treatment. Acute exacerbation of IPF.

39. Hypersensitivity pneumonitis (HP): the nature of this assembly of pulmonary conditions, etiology, and major pathogenetic mechanisms. Types of HP (acute and chronic forms), their clinical presentations, diagnosis, management, and prognosis.

40. Sarcoïdosis: nature of this disease, epidemiology, and general pathogenesis. Variants of the clinical course of sarcoidosis: acute and chronic. Pulmonary manifestations of sarcoidosis with radiological stages. Main extrapulmonary manifestations of sarcoidosis. Diagnosis of sarcoidosis, necessary investigations, differential diagnosis, indications for treatment, and pharmacotherapy of sarcoidosis. Prognosis according to the type of the course of the disease, organ involvement, and radiological stage of the pulmonary lesions.

41. Major forms of the respiratory manifestations of systemic connective tissue diseases (rheumatoid arthritis, systemic lupus erythematosus, systemic sclerosis, dermatopolymyositis, mixed connective tissue disease etc.).
42. Vasculitis involving the lungs. Pulmonary manifestations of the major forms of vasculitis: granulomatosis with polyangiitis (formerly Wegener’s granulomatosis), eosinophilic granulomatosis with polyangiitis (formerly Churg-Strauss syndrome), microscopic polyangiitis), diagnosis and treatment.

43. Sleep-disordered breathing: classification, clinical manifestations, main diagnostic methods, and distinguishing between different forms. Obstructive sleep apnea-hypopnea syndrome (OSA(H)S): main mechanisms, clinical signs and presentation, diagnosis, and current means of management.

44. Tuberculosis: epidemiology, reasons for deterioration of the epidemiological situation.

45. Getting infected with tuberculosis, major mechanisms of transmission of tuberculosis; pathogenesis of tuberculosis. Various clinical forms of pulmonary tuberculosis with the respective clinical presentations. More frequent forms (localizations) of extrapulmonary tuberculosis with the respective signs, symptoms, and diagnosis.


Study literature


6. Pulmonoloogia ja torakaalkirurgia eriala õppematerjalid
http://www.kliinikum.ee/kopsukliinik

Textbooks
