

Department of Internal Medicine #1

Core, VII-VIII semester
Cardiology, Pulmonology

Teaching course description

Lectures

1. Systemic hypertension. Risk stratification, diagnosis, treatment.
2. Acute coronary syndrome
3. Acute myocardial infarction
4. Rheumatic heart disease
5. Infective endocarditis
6. Valvular heart disease
7. Myocarditis
8. Cardiomyopathies
9. Pericarditis
10. Heart failure
11. Disturbances of rate and rhythm; Heart conduction system disorders
12. Pneumonia
13. Chronic obstructive pulmonary disease
14. Asthma
15. Pulmonary hypertension, pulmonary thromboembolism, Cor pulmonale
16. Pulmonary thromboembolism
17. Lung abscess, Bronchiectasis
18. Pleuritis

Practical studies

1. ECG – Normal ECG; analysis.
2. Systemic hypertension – definition, classification, pathophysiology, history, physical examination, follow-up blood pressure measurement.
3. Angina pectoris – definition, risk factors, clinical manifestations (stable, unstable), functional classification, diagnosis, treatment, prevention, management of dyslipidemic patients Myocardial revascularization. Case history discussion
4. Acute coronary syndrome – unstable angina, myocardial infarction without persistent ST-segment elevation- clinical manifestations, diagnosis (lab. studies, ECG, ultrasound), treatment.
5. Acute myocardial infarction - definition, acute coronary syndrome, risk factors, clinical manifestation, diagnosis, ECG. complications, treatment (anti-ischemic therapy, antithrombotic therapy) secondary prevention. Case history discussion
6. Rheumatic heart disease – etiology, clinical manifestation, diagnosis, diagnostic criteria's, complications, treatment
7. Infective endocarditis – definition, categories: native valve, prosthetic valve endocarditis, endocarditis related to intravenous drug use. Symptoms, physical signs, causes, diagnostic examinations (lab. studies, imaging studies), treatment, complications
8. Aortic stenosis and regurgitation. - clinical findings, physical examination, ultrasound examination, treatment

9. Mitral stenosis and regurgitation - clinical findings, physical examination, ultrasound examination, treatment
10. Myocarditis – etiology, clinical findings, essentials of diagnosis, treatment & prognosis
11. Cardiomyopathies – dilated, hypertrophic, restrictive. Clinical findings, diagnosis, treatment
12. Pericarditis – classification, clinical findings, differential diagnosis, treatment, prognosis, cardiac tamponade. case history discussion
13. Heart failure – definition, classification, pathophysiology, etiology, acute and chronic heart failure, NYHA classification, heart failure with preserved systolic function, treatment.
14. Disturbances of rate and rhythm: Classification, Sinus arrhythmia, bradycardia, tachycardia. Atrial premature beats, paroxysmal supraventricular tachycardia, atrial fibrillation, flutter. Ventricular extrasystoles, tachycardia, flutter, fibrillation– clinical findings, ECG, diagnostic tests, treatment
15. Heart conduction system disorders. Heart blocks - clinical findings, ECG, diagnostic tests, treatment.
16. Pneumonia – classification, community acquired, hospital acquired pneumonia. Etiology, clinical findings, diagnosis, lab. tests, chest x-ray, complications, treatment
17. COPD – chronic bronchitis, emphysema. Clinical findings, diagnosis, pulmonary function tests, differential diagnosis, complication, prevention, treatment
18. Asthma – definition, classification, pathogenesis, clinical findings, diagnosis, differential diagnosis, pulmonary function testing, lab. tests, prevention, complications, classification of asthma severity, treatment, approach to long-term treatment
19. Pulmonary hypertension– causes, pathogenesis, clinical findings, essentials of diagnosis, lab. findings, ECG and chest radiography
20. Cor pulmonale – definition, etiology, clinical manifestation, diagnosis, treatment
21. Lung abscess - definition, etiology, clinical manifestation, diagnosis, treatment
22. Bronchiectasis – etiology, clinical findings, diagnostic examinations, lab. testing, chest x-ray, bronchoscopy, complications, treatment
23. Pleuritis – classification, etiology, clinical findings, lab. findings, imaging, treatment

1. A 42-year-old woman has noted increasing dyspnea for the past 6 years. On examination rales are auscultated in both lungs. She is afebrile. A chest radiograph shows an enlarged cardiac silhouette and bilateral pulmonary edema. Past history reveals that, as a child she suffered recurrent bouts of pharyngitis with group A beta hemolytic streptococcal infections. Which of the following cardiac valves are most likely to be abnormal in this woman?

- A. Aortic and tricuspid
- B. Mitral and pulmonic
- C. Aortic and pulmonic
- D. Tricuspid and pulmonic
- E. Mitral and aortic

2. A 49-year-old man has the sudden onset of substernal chest pain with radiation to his left arm. This persists for the next 6 hours. He goes to the emergency department and on examination is afebrile. Laboratory studies show a serum troponin I of 18 ng/mL and CK-MB of 8%. Angiography reveals a thrombosis of the left anterior descending coronary artery. During the next 24 hours, which of the following is the most likely complication he will experience?

- A. Constrictive pericarditis
- B. Cardiac arrhythmia
- C. Hepatic necrosis
- D. Thromboembolism
- E. Myocardial rupture

3. A 35-year-old previously healthy woman dies suddenly and unexpectedly. At autopsy, one of her cardiac valves demonstrates attenuation of the chordae tendineae, with rupture of one of the chordae. On microscopic examination, one of the mitral leaflets show myxomatous change. Which of the following is the most likely cause for her death?
- A. Carcinoid heart syndrome
 - B. Mitral valve prolapse
 - C. Rheumatic heart disease
 - D. Infective endocarditis
 - E. Acute myocardial infarction
4. Atrial fibrillation is a common symptom that only occurs with
- A. Mitral regurgitation
 - B. Mitral stenosis
 - C. Aortic regurgitation
 - D. Aortic stenosis
5. All are key manifestations of endocarditis EXCEPT?
- A. Janeway's lesion
 - B. Fever
 - C. Dry cough
 - D. Systemic embolization
6. Atrial fibrillation is a common symptom that only occurs with
- A. Mitral regurgitation
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 - C. Aortic regurgitation
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7. All are key manifestations of endocarditis EXCEPT?
- A. Janeway's lesion
 - B. Fever
 - C. Dry cough
 - D. Systemic embolization
8. All are assessment findings of acute pericarditis EXCEPT?
- A. Ankle edema
 - B. Substernal pain
 - C. Friction rubs
 - D. Elevated WBC count
9. ST segment elevation is indicative of:
- A. Ischemia
 - B. Infarction
 - C. Injury
10. Unmodifiable risk factors for coronary artery disease include which of the following?
- A. Low density lipoprotein levels, gender, obesity
 - B. Sedentary lifestyle, race, oral contraceptive use
 - C. Age, gender, family history
 - D. Hyperlipidemia, diabetes, stress, smoking
11. What is the number one cause of chronic congestive heart failure?
- A. Alcohol abuse
 - B. Cocaine

- C. Coronary artery disease
 - D. Viral myocarditis
12. The following microbiological investigations should be done in all cases of community acquired pneumonias ...except one investigation
- A. sputum for gram stain and culture
 - B. blood cultures
 - C. pleural fluid aspirate
 - D. serology with acute and convalescent titers to diagnose mycoplasma, Chlamydia, legionella and viral pneumonias
13. Feature suggestive of high mortality in pneumonias all are true except:
- A. respiratory rate more than 30/minute
 - B. systolic blood pressure below 90mmHg and or Diastolic blood pressure below 60 mmHg
 - C. blood urea more than 17 mmol/L
 - D. positive blood culture
14. All of the medications are asthma controllers, which affect the underlying causes of the disease, except:
- A. Inhaled corticosteroids
 - B. Inhaled muscarinic receptor antagonists
 - C. Leukotriene receptor antagonists
 - D. Mast cell stabilizers
15. An exudative pleural effusion may be characterized by:
- A. elevated pleural fluid protein level
 - B. A high RBC count
 - C. A glucose level of less than 70
 - D. All of above
16. Which of the following is not a cause of an exudative pleural effusion
- A. Congestive heart failure
 - B. Empyema
 - C. Tuberculosis
 - D. Systemic lupus erythematosus
17. Most patients with COPD have a history of
- A. Cigarette smoking
 - B. Excessive alcohol consumption
 - C. Seasonal allergies
 - D. Injection drug use
18. A history of smoking, abnormal permanent enlargement of the alveoli, cough and dyspnea suggest
- A. Asthma
 - B. Emphysema
 - C. Chronic bronchitis
 - D. Obstructive sleep apnea
19. At the patient with chronic cor pulmonale all signs can be observed, except:
- A. Dyspnea
 - B. Tachycardia
 - C. Right bundle block
 - D. Left ventricular failure
20. What kind of pleural effusion develops in pulmonary thromboembolism
- A. serous
 - B. purulent
 - C. chylous
 - D. hemorrhagic

