

1. A 19-year-old student was urgently hospitalized due to a marked dyspnea and chest pain on the left. Her body temperature is 38.8<sup>o</sup>C) She has been presenting with these signs for 3 days. Respiratory rate is 42/min., shallow. Percussion sound is dull to the left from the center of the scapula, no respiration can be auscultated. The left heart border is displaced outwards by 3 cm. Embryocardia and heart rate of 110/min are observed. Palpation of the right subcostal area is painful. What urgent measures should be taken in this case?

- a. Administration of cardiac glycosides
  - b. Prescription of penicillin antibiotics
  - c. Urgent thoracocentesis
  - d. Administration of furosemide
  - e. Referral into the thoracic surgery unit
- Правильна відповідь: Urgent thoracocentesis

2. A 62-year-old woman was brought into the admission room with complaints of severe burning retrosternal pain and asphyxia. She has a 10-year-long history of essential hypertension. Objectively her condition is moderately severe. She presents with skin pallor, cyanotic lips, and vesicular respiration over her lungs. The II heart sound is accentuated over the aorta. Blood pressure - 210/120 mm Hg, heart rate (pulse) - 76/min. ECG shows elevation of ST segment in the leads I, AVL, and V5-V6. What is the most likely diagnosis?

- a. Hypertensive crisis complicated with acute left ventricular failure
- b. Hypertensive crisis complicated with instable angina pectoris
- c. Uncomplicated hypertensive crisis
- d. Hypertensive crisis complicated with acute myocardial infarction
- e. Pulmonary embolism

Правильна відповідь: Hypertensive crisis complicated with acute myocardial infarction

3. A 55-year-old man on the 3rd day after an acute anterior myocardial infarction complains of shortness of breath and a dull pain behind the sternum that decreases when he leans forward. Objectively, his blood

pressure is 140/80 mm Hg and his heart sounds are muffled. ECG shows atrial fibrillation with the ventricular rate of 110/min., pathological Q wave, and ST segment elevation in the right-sided chest leads. Make the diagnosis:

- a. Tietze syndrome
- b. Acute pericarditis
- c. Pulmonary embolism
- d. Dissecting aortic aneurysm
- e. Dressler syndrome

Правильна відповідь: Acute pericarditis

4. A 45-year-old man underwent a cardiac surgery one week ago. His general state has been deteriorating since then: dyspnea at rest, retrosternal pain that irradiates to the neck, marked weakness. Objectively his body temperature is hectic. His cardiac borders are expanded, apical beat is weakened. Auscultation detects pericardial friction rub. What is the most likely diagnosis?

- a. Pulmonary embolism
- b. Myocardial infarction
- c. Acute cardiac aneurysm
- d. Acute pericarditis
- e. Acute myogenic dilatation of the heart

Правильна відповідь: Acute pericarditis

5. The dispatching department of the Center for Emergency Medical Care and Disaster Medicine received a call from a local citizen, who complained of retrosternal constricting pains irradiating to the left hand. The taking of nitroglycerine brings no relief. Specify the terms within which an emergency medical team should arrive in this case:

- a. 10 minutes after the call was made
- b. 60 minutes after the call was made
- c. 30 minutes after the call was made
- d. 15 minutes after the call was made
- e. 20 minutes after the call was made

Правильна відповідь: 10 minutes after the call was made

6. A man was undergoing treatment for a myocardial infarction. On day 13, his chest pain increased and he developed shortness of breath. Objectively, the following is observed: temperature -  $38.2^{\circ}\text{C}$ , pulse - 112/min., respiration rate - 26/min., fine bubbling crackles can be heard under the right shoulder blade. On day 15, he was diagnosed with right-sided exudative pleurisy. Complete blood count shows the following: leukocytes -  $8.9 \cdot 10^9/\text{L}$ , eosinophils - 8 %. ESR - 24 mm/hour. What complication of myocardial infarction occurred in this patient?
- a. Pulmonary embolism
  - b. Recurrent myocardial infarction
  - c. Pneumonia
  - d. Dressler syndrome
  - e. Cardiac asthma

Правильна відповідь: Dressler syndrome

7. Four weeks after a myocardial infarction, a 52-year-old man developed an elevated body temperature and pain in the area of his heart, behind the sternum, and in the sides of his torso. The pain intensifies during breathing. A few days later, the patient developed arthralgias as well. Examination reveals pericarditis, pleurisy, and arthritis. Blood test shows leukocytosis and increased ESR. ECG revealed concordant elevation of the ST segment in standard leads. What is the most likely diagnosis in this case?
- a. Sjogren's syndrome
  - b. Dressler's syndrome
  - c. Acute myocarditis
  - d. Recurrent myocardial infarction
  - e. Pulmonary thromboembolism

Правильна відповідь: Dressler's syndrome

8. A 62-year-old patient has been hospitalized with complaints of intense retrosternal pain that lasts for one hour already and cannot be relieved with nitroglycerin. The patient suffers from angina pectoris, previously the attacks could be relieved with nitrates. The patient has no other diseases. Objectively, cyanosis of the lips is observed. Heart sounds are dull and rhythmic. ECG shows elevation of ST segment in leads V4-V6. What drug must be immediately administered to the patient?

- a. Dimedrol (Diphenhydramine)
- b. Analgin (Metamizole sodium)
- c. No-spa (Drotaverine)
- d. Actilyze (Alteplase)
- e. Corglycon

Правильна відповідь: Actilyze (Alteplase)

9. A 72-year-old man on the 7th day after a surgical reposition of an intertrochanteric hip fracture has suddenly developed dyspnea and an intense pain in the left side of his chest. Examination reveals distended cervical veins and cyanosis. His respiration rate is 26/min. Auscultation detects weakened breathing over the left lung. Heart rate - 98/min. Blood pressure - 120/70 mm Hg. CT scan shows significant disappearance of the lung pattern on the left. Echocardiography shows no signs of right ventricle overload. What next step will be the most advisable in this case?

- a. Prescribing low molecular weight heparin
- b. Surgical embolectomy
- c. Thrombolytic injection into the left pulmonary artery
- d. Installing a vena cava filter
- e. Prescribing aspirin (acetylsalicylic acid)

Правильна відповідь: Prescribing low molecular weight heparin

10. A 42-year-old man was hospitalized with complaints of shortness of breath, weakness, and constricting and burning chest pain that radiates into the left shoulder and left scapula. The pain syndrome occurred for the first time in his life after emotional and physical stress and lasts approximately 2 hours already; it slightly decreased, but did not disappear even after repeated sublingual administration of nitroglycerin and aspirin in the dose of 325 mg. Provisional diagnosis: acute coronary syndrome without ST elevation. Objectively, blood pressure - 110/70 mm Hg, pulse - 98/min., rhythmic. Heart sounds are weakened, no murmurs. ECG shows ST segment depression and a negative T wave in leads I, aVL, V3-V6. What is the most likely diagnosis in this case?

- a. Acute coronary syndrome with ST elevation

- b. First episode of angina pectoris
- c. Unstable angina pectoris
- d. Non-Q-wave anterolateral myocardial infarction
- e. Non-Q-wave inferior myocardial infarction

Правильна відповідь: Non-Q-wave anterolateral myocardial infarction