

Test according to topic 4: Management of a patient with cardiac arrhythmias

1. A 52-year-old man complains of periodic palpitation attacks that last 3-8 minutes and then stop on their own. Follow-up examinations and ECG detected no rhythm disturbances. What special method of diagnosing rhythm disturbances must be performed first in this case?

- a. Transesophageal electric stimulation of the heart
- b. Bicycle ergometry
- c. Spirography
- d. Holter ECG monitoring*
- e. Treadmill exercise stress test

2. A 72-year-old man diagnosed with ischemic heart disease presents with diffuse cardiosclerosis, permanent tachysystolic atrial fibrillation, heart failure IIa, FC III. Objective examination of vital signs: blood pressure is 135/80 mm Hg, heart rate is 160/min., pulse is 125/min. Left ventricular ejection fraction is 32%. What drug is indicated in this case and should be prescribed to the patient?

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- a. Ivabradine
- b. Verapamil
- c. Digoxin*
- d. Isadrine (Isoprenaline)
- e. Procainamide (Novocainamide)

3. A 50-year-old man complains of palpitations, irregular heart rate, and retrosternal pain attacks that occur during significant physical exertion. Objectively, his heart sounds are muffled and arrhythmic, heart rate - 100/min., blood pressure - 150/90 mm Hg. ECG shows single ventricular extrasystoles. What medicines should be prescribed in this case?

- a. Diuretics
- b. beta-blockers*
- c. Long-acting nitrates
- d. ACE inhibitors
- e. Calcium antagonists

4. An injured electrician in a state of clinical death is being resuscitated. ECG registers large-focal ventricular fibrillation. When, according to the clinical practice

guidelines for sudden circulatory arrest, must be medicines administered, namely, adrenaline solution and amiodarone solution?

- a. After the fourth defibrillation
- b. After the third defibrillation*
- c. After the second defibrillation
- d. After the first defibrillation
- e. At the very beginning of the resuscitation measures

5. A 56-year-old patient with diffuse toxic goiter has ciliary arrhythmia, heart rate is 110-120/min., arterial hypertension, BP is 165/90 mm Hg. What drug besides Mercazolil (Thiamazole) should be prescribed in this case?

- a. Verapamil
- b. Propranolol*
- c. Corinfar
- d. Radioactive iodine
- e. Novocainamide (procainamide)

6. A 38-year-old woman after physical overexertion suddenly developed palpitations, dyspnea, and a dull pain in the cardiac area. For 10 years she has been registered for regular check-ups due to rheumatism and mitral valve disease with non-disturbed blood circulation. Objectively her pulse is 96/min., of unequal strength. Blood pressure is 110/70 mm Hg, heart rate is 120/min. ECG registers small unevenly-sized waves in place of P-waves, R-R intervals are of unequal length. What is the most likely diagnosis?

- a. Atrial fibrillation*
- b. Respiratory arrhythmia
- c. Paroxysmal ventricular tachycardia
- d. Paroxysmal supraventricular tachycardia
- e. Atrial flutter

7. 35-year-old man, who for the last 3 years has been on hemodialysis due to chronic glomerulonephritis, developed disturbances of the cardiac performance, hypotension, progressing weakness, and dyspnea. ECG shows bradycardia, 1st degree atrioventricular block, tall and sharp T-waves. The day before he had a serious break from his solid and liquid diet. What biochemical changes are the most likely cause of the described clinical presentation?

- a. Hypocalcemia

- b. Hyperhydration
- c. Hyponatremia
- d. Hypokalemia
- e. Hyperkalemia*

Добавлено примечание ([t1]):

8. Twenty-four hour ECG monitoring has recorded 26 supraventricular extrasystoles in a 23-year-old patient. What would be the further doctor's tactics in this case?

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- a. Intravenous administration of a beta-blocker
- b. Vagus nerve testing
- c. Intravenous administration of amiodarone
- d. No pharmacological correction is needed*
- e. Calcium channel antagonist, administered empirically

9. A 68-year-old man diagnosed with acute myocardial infarction is in an intensive care unit. Suddenly he fell unconscious. Objectively, his pulse and blood pressure cannot be detected. ECG shows frequent irregular waves of varying shape and amplitude. What complication occurred in this patient?

- a. Asystole
- b. Paroxysmal ventricular tachycardia
- c. Pulmonary embolism
- d. Acute heart failure
- e. Ventricular fibrillation*

10. A 68-year-old patient complains of weakness and rapid and irregular heart rate. The patient has a 5-year-long history of arterial hypertension. Objectively, the following is observed: blood pressure - 150/95 mm Hg, heart rate - 125/min., pulse - 88/min. Auscultation detects vesicular respiration in the lungs. Percussion detects that the left border of the relative cardiac dullness expands 2 cm outwards from the midclavicular line. The heart sounds are muffled, the rhythm is irregular, no pathological sounds. ECG reveals the following: heart rate - 128/min., QRS - 100 milliseconds, QT - 380 milliseconds, no P waves, varying length of RR intervals. What heart rhythm disorder has developed in this patient?

- a. Ventricular fibrillation
- b. Atrial fibrillation*
- c. AV nodal tachycardia

d. Supraventricular extrasystole

e. Sinus tachycardia

11. A 68-year-old woman with congestive heart failure and left ventricular ejection fraction of less than 40% receives the following pharmacotherapy scheme: ramipril, torasemide, bisoprolol, clopidogrel, and digoxin. During one of her regular examinations, frequent polymorphic ventricular extrasystoles were detected in the patient. What medicine should be removed from her therapy scheme?

a. Torasemide

b. Bisoprolol

c. Clopidogrel

d. Digoxin*

e. Ramipril

12. A 46-year-old man, suffering from a constricting pain in the cardiac area, developed circulatory and respiratory arrest. ECG monitor shows a large-wave ventricular fibrillation. What should be done first in this case?

a. Give lidocaine intravenously

b. Perform defibrillation*

c. Give dopamine intravenously

d. Implant an electronic pacemaker

e. Give atropine intravenously

13. A 45-year-old man with a history of myocardial infarction developed a brief attack of palpitations, accompanied by the sensations of lack of air, fear, and vertigo. His blood pressure is 90/60 mm Hg. ECG during the attack shows extended QRS complex (0.13 seconds) with heart rate of 160/min., discordant shift of ST segment and T wave, dissociation of atrial and ventricular rhythm. What disturbance of cardiac rhythm is it?

a. Atrial fibrillation

b. Paroxysmal ventricular tachycardia*

c. Ventricular fibrillation

d. Paroxysmal supraventricular tachycardia

e. Frequent ventricular extrasystoles

14. ECG revealed the following in a 10-year-old child: sharp acceleration of the heart rate - 240/min., P wave overlaps with T wave and deforms it, moderate lengthening

of PQ interval, QRS complex is without changes. What pathology does this child have?

- a.Extrasystole
- b.Ventricular hypertrophy
- c.WPW syndrome
- d.Atrial hypertrophy
- e.Paroxysmal atrial tachycardia*

15. A 65-year-old patient with a history of arterial hypertension complains of dizziness and palpitations that occurred throughout the last hour. Objectively, the following is observed: blood pressure - 80/40 mm Hg, heart rate - 150/min., pulse - 106/min. ECG revealed missing P wave and varying RR intervals, ventricular contraction rate is 136-148/min. What aid must be provided to the patient first?

- a.Prescription of amiodarone intravenously
- b.Urgent electrical cardioversion
- c.Prescription of beta-blockers intravenously
- d.Pacemaker implantation
- e.Prescription of calcium channel blockers intravenously