

CARDIOLOGY (KROK2test)

A patient with unstable angina pectoris was given the following complex treatment: anticoagulants, nitrates, β -adrenoblockers. However on the third day of treatment the pain still remains. Which investigation should be carried out to establish diagnosis?

- A. Coronarography
- B. Stress-echocardiogram
- C. Test with dosed physical exercises
- D. Esophageal electrocardiac stimulator
- E. Myocardial scintigraphy

A 52 y.o. man has recurrent transient ischemic attacks. Auscultation of the carotid arteries detects murmur. What diagnostic method is necessary to apply first?

- A. Ultrasound dopplerography
- B. CT of the brain
- C. MRI of the brain
- D. Cerebral angiography
- E. Electroencephalography

A 67 y.o. patient complains of palpitation, dizziness, noise in ears, feeling of shortage of air. Objectively: pale, damp skin. Vesicular respiration, respiratory rate- 22 per min, pulse- 200 bpm, AP-100/70 mm Hg. On ECG: heart rate-200 bpm, ventricular complexes are widened, deformed, location of segments ST and of wave T is discordant. The wave P is not changed, superimposes QRST, natural conformity between P and QRS is not present. What kind of arrhythmia is present?

- A. Paroxysmal ventricular tachycardia
- B. Sinus tachycardia
- C. Atrial flutter
- D. Ventricular extrasystole
- E. Atrial tachycardia

A 40 y.o. patient of rheumatic heart disease complains of anorexia, weakness and loss of weight, breathless and swelling of feet. On examination: $t_{39.0}^{\circ}C$, pulse is 100/min. Auscultation: diastolic murmur in the mitral area. Petechial lesion at clavicle; spleen was palpable, tooth extraction one month ago.

- A. Subacute bacterial endocarditis
- B. Recurrence of rheumatic fever
- C. Thrombocytopenia purpura
- D. Mitral stenosis
- E. Aortic stenosis

A 19 y.o. man was admitted to the reception department in 20 minutes after being wounded with the knife to the left chest. The patient is confused. The heart rate is 96 bpm and BP- 80/60 mm Hg. There are the dilated neck veins, sharply diminished apical beat and evident heart enlargement. What kind of penetrating chest wound complications has developed in patient?

- A. Pericardium tamponade
- B. Massive hemothorax
- C. Open pneumothorax

- D. Closed pneumothorax
- E. Valve-like pneumothorax

A 64 y.o. patient has developed of squeezing substernal pain which had appeared 2 hours ago and irradiated to the left shoulder, marked weakness. On examination: pale skin, cold sweat. Pulse- 108 bpm, AP- 70/50 mm Hg, heart sound are deaf, vesicular breathing, soft abdomen, painless, varicose vein on the left shin, ECG: sinus rhythm, heart rate is 100 bpm, ST-segment is sharply elevated in II, III aVF leads. What is the most likely disorder?

- A. Cardiogenic shock
- B. Cardiac asthma
- C. Pulmonary artery thromboembolia
- D. Dissective aortic aneurism
- E. Cardiac tamponade

A 37 y.o. woman is suffering from squeezing substernal pain on physical exertion. On examination: AP- 130/80 mm Hg, heart rate=pulse rate 72 bpm, heart borders are dilated to the left side, aortic systolic murmur. ECG- signs of the left ventricle hypertrophy. What method of examination is the most informative in this case?

- A. Echocardiography
- B. Phonocardiography
- C. Coronarography
- D. Sphygmography
- E. X-ray

A 5 y.o. child with stigmas of dysmaturism (small chin, thick lips, opened mouth, hyperthelorum) has systolic murmur in the second intercostal to the right of the sternum. The murmur passes to the neck and along the sternum left edge. The pulse on the left brachial artery is weakened. BP on the right arm is 110/60 mm Hg, on the left - 100/60 mm Hg. ECG results: hypertrophy of the right ventricle. What defect is the most probable?

- A. Aortic stenosis
- B. Defect of interventricular septum
- C. Defect of interatrial septum
- D. Coarctation of the aorta
- E. Open aortic duct

A female rheumatic patient experiences diastolic thoracic wall tremor (diastolic thrill), accentuated S1 at apex, there is diastolic murmur with presystolic intensification, opening snap, S2 accent at pulmonary artery. What kind of heart disorder is observed?

- A. Mitral stenosis
- B. Aortic valve insufficiency
- C. Pulmonary artery stenosis
- D. Mitral valve insufficiency
- E. Opened arterial duct

A 40 y.o. man complains of headache in occipital area. On physical examination: the skin is pale; face and hand edema, BP- 170/130 mm Hg. On EchoCG: concentric hypertrophy of the left ventricle. Ultrasound examination of the kidneys reveals thinned cortical layer. Urine analysis shows proteinuria of 3,5 g/day. What is the probable diagnosis?

- A. Essential arterial hypertension
- B. Chronic pyelonephritis
- C. Chronic glomerulonephritis
- D. Polycystic disease of the kidneys
- E. Cushing's disease

A 43 y.o. woman complains of shooting heart pain, dyspnea, irregularities in the heart activity, progressive fatigue during 3 weeks. She had acute respiratory disease a month ago. On examination: AP- 120/80 mm Hg, heart rate 98 bpm, heart borders +1,5 cm left side, sounds are muffled, soft systolic murmur at apex and Botkin's area; sporadic extrasystoles. Liver isn't palpated, there are no edema. Blood test: WBC- $6,7 \times 10^9$ /L, sedimentation rate- 21 mm/hour. What is the most probable diagnosis?

- A. Acute myocarditis
- B. Climacteric myocardiodystrophy
- C. Ischemic heart disease, angina pectoris
- D. Rheumatism, mitral insufficiency
- E. Hypertrophic cardiomyopathy

On the 3rd day after the acute anterior myocardial infarction a 55 y.o. patient complains of dull ache behind his breast bone, that can be reduced by bending forward, and of dyspnea. Objectively: AP- 140/180 mm Hg, heart sounds are dull. ECG results: atrial fibrillation with frequency of ventricular contractions at the rate of 110/min, pathological Q wave and S-T segment raising in the right chest leads. The patient refused from thrombolysis. What is the most probable diagnosis?

- A. Acute pericarditis
- B. Pulmonary embolism
- C. Tietze's syndrome
- D. Dissecting aortic aneurysm
- E. Dressler's syndrome

A 40 y.o. patient with rheumatic heart disease complains of anorexia, weakness and loss of weight, breathlessness and swelling of feet. The patient had tooth extraction one month ago. On examination: $t_0-39^{\circ}\text{C}$, Ps- 100/min. Auscultation: diastolic murmur in the mitral area. Petechial lesions are round of clavicle; spleen was palpable.

- A. Subacute bacterial endocarditis
- B. Recurrence of rheumatic fever
- C. Thrombocytopenia purpura
- D. Mitral stenosis
- E. Aortic stenosis

A 58 y.o. man complained of severe inspiratory dyspnea and expectoration of frothy and blood-tinged sputum. He has been suffering from essential hypertension and ischemic heart disease. On examination: acrocyanosis, "bubbling" breathing, Ps- 30/min, BP- 230/130 mm Hg, bilateral rales. Choose medicines for treatment.

- A. Morphine, furosemide, nitroprusside sodium
- B. Theophylline, prednisolone
- C. Albuterol, atropine, papaverine
- D. Strophanthine, potassium chloride, plathyphylline

E. Cordiamine, isoproterenol

A patient has got a sudden attack of severe substernal pain at night. On examination: confusion, pallor of the skin, acrocyanosis, cold sweat, BP- 80/50 mm Hg, Ps- 120/min, irregular and weak pulse. What condition are these symptoms typical for?

- A. Cardiogenic shock
- B. Acute left-side heart failure
- C. Acute right-side heart failure
- D. Radicular syndrome
- E. Acute vascular insufficiency

A 61 y.o. man complained of sneezing and substernal pain on exertion. In the last 2 weeks such pain appeared at rest, with increased frequency, and couldn't be suppressed by 1 tablet of nitroglycerin. What is the most likely diagnosis?

- A. Unstable angina pectoris
- B. Angina pectoris of a new onset
- C. Myocarditis
- D. Radiculitis
- E. Stable angina pectoris of the III functional class

A 60 y.o. woman has had increased BP up to 210/110 mm Hg for the last 7 years. On examination: heart apex is displaced to the left. There are signs of left ventricular hypertrophy on ECG. What is the most probable diagnosis?

- A. Essential hypertension, 2nd stage
- B. Essential hypertension, 1st stage
- C. Symptomatic hypertension
- D. Cardiomyopathy
- E. Ischemic heart disease

A 34 y.o. patient has been suffering from pulmonary tuberculosis for 7 years; he complains of muscle weakness, weight loss, diarrhea, frequent urination. Objectively: hyperpigmentation of skin, gums, internal surface of cheeks. AP- 90/58 mmHg. Blood count: RBC- $3,1 \times 10^{12}/L$, Hb- 95 g/L, C.I.- 0,92; leukocytes - $9,4 \times 10^9/L$, eosinophils - 7, segmentonuclear leukocytes - 45, stab neutrophils - 1, lymphocytes - 40, monocytes - 7, Na⁺-115 mmol/L, +- 7,3 mmol/L. What is the preliminary diagnosis?

- A. Primary adrenocortical insufficiency
- B. Pheochromocytoma
- C. Primary hyperaldosteronism
- D. Congenital adrenocortical hyperplasia
- E. Diabetes insipidus

A 52 y.o. male patient suffers from squeezing pain attacks in substernal area which irradiates to the left hand and occurs occasionally and on physical exercises. He has had it for 1 year. On examination: heart borders are enlargement to the left side, sounds are muffled, Ps- 76 bpm, rhythmic, AP- 155/80 mm Hg, ECG: the left type, the rest signs are normal. What additional examination is necessary to confirm the diagnosis?

- A. Veloergometry
- B. Echocardiography

- C.Lipoprotein test
- D.General blood count
- E.Transaminases of blood

A 70 y.o. patient complains of weakness, dizziness, short periods of loss of consciousness, pain in the region of heart. Objectively: HR- 40/min, sounds are rhythmic, the 1st sound is dull, occasionally very intensive. AP- 180/90 mm Hg. What is the most probable reason of hemodynamic disorders?

- A.III degree atrioventricular heart block
- B.I degree atrioventricular heart block
- C.Bradysystolic form of the atrial fibrillation
- D.Sinus bradycardia
- E.Complete block of the left branch of His bundle

A 20 y.o. patient complains of amenorrhea. Objectively: hirsutism, obesity with fat tissue prevailing on the face, neck, upper part of body. On the face there are acne vulgaris, on the skin - striae cutis distense. Psychological and intellectual development is normal. Gynecological condition: external genitals are moderately hairy, acute vaginal and uterine hypoplasia. What diagnosis is the most probable?

- A.Itsenko-Cushing syndrome
- B.Turner's syndrome
- C.Stein-Levental's syndrome
- D.Shichan's syndrome
- E.Babinski-Froehlich syndrome

Adenosine triphosphate may be expected to convert which of the following arrhythmias to sinus rhythm?

- A. Paroxysmal supraventricular tachycardia
- B.Paroxysmal ventricular tachycardia
- C.Atrial fibrillation
- D.Atrial flutter
- E.Ventricular fibrillation

A 52 year old patient with history of functional Class II angina complains of having intense and prolonged retrosternal pains, decreased exercise tolerance for 5 days. Angina is less responsive to nitroglycerine. What is the most probable diagnosis?

- A.IHD. Unstable angina
- B.Cardialgia due to spine problem
- C.IHD. Functional Class II angina
- D.Myocarditis
- E.Myocardial dystrophy

A 52 year old patient has hypervolaemic type of essential hypertension. Which of the following medications is to be prescribed either as monotherapy or in complex with other antihypertensive drugs?

- A.Hypothiazid
- B.Dibazol
- C.Clonidine

- D.Kapoten
- E.Nifedipin

A patient, aged 49, complains of fever of 37,5°C, heart pain, dyspnea. S1 is clapping; S2 is accentuated in the aortic area; opening snap, presystolic murmur can be auscultated. What is the most efficient examination for valvular disorder assessment?

- A. Echocardiography+Doppler-Echocardiography
- B. Phonocardiography
- C. Ballistocardiogram
- D. Chest X-ray
- E. ECG

A 42 year old woman complains of dyspnea, edema of the legs and tachycardia during minor physical exertion. Heart borders are displaced to the left and S1 is accentuated, there is diastolic murmur on apex. The liver is enlarged by 5 cm. What is the cause of heart failure?

- A. Mitral stenosis
- B. Mitral regurgitation
- C. Tricuspid stenosis
- D. Tricuspid regurgitation
- E. Aortic stenosis

A 30 year old woman ill with influenza felt palpitation and dull cardiac pain during moderate physical exercise. Objectively: Ps - 96 bpm, AP - 100/60 mm Hg. The first sound is quiet above the apex, soft systolic murmur is present. What complication is indicated by these clinical presentations?

- A. Acute viral myocarditis
- B. Acute allergic infectious myocarditis
- C. Idiopathic myocarditis
- D. Myocardiopathy
- E. Neurocirculatory dystonia

A 46 year old woman who has been suffering from hypertension for 5 years was diagnosed with hypertensive crisis. She complains about palpitation, sense of head pulsation; heart rate is 100/min, AP is 190/100 mm Hg (haemodynamics is of hyperkinetic type). What medication should be the medication of choice?

- A. β -adrenoceptor blocker
- B. Adenosine pyrophosphate inhibitor
- C. Diuretic
- D. α -adrenoceptor blocker
- E. Dihydropyridine calcium antagonist

A 58 y.o. patient developed acute myocardium infarction 4 hours ago, now he is in the acute care department. ECG registers short paroxysms of ventricular tachycardia. The most appropriate measure will be to introduce:

- A. Lidocain
- B. Flecainid
- C. Amyodaron
- D. Propafenone

E. Veropamil

After a long period of subfebrility a patient registered increase of dyspnea, pain in the right hypochondrium, leg edemata. Objectively: neck veins are edematic. Ps is 120 bpm, sometimes it disappears during inspiration. Heart sounds are very weakened. ECG showed low-voltage waves of ventricular complex. A month ago there was raise of STV1–V4 segment. Cardiac silhouette is enlarged, roundish. What is the most probable diagnosis?

- A. Exudative pericarditis
- B. Small-focal myocardial infarction
- C. Postinfarction cardiosclerosis
- D. Metabolic postinfection cardiomyopathy
- E. Primary rheumatic carditis

A 74 y.o. patient has been suffering from hypertension for 20 years. He complains of frequent headache, dizziness, he takes enalapril. Objectively: accent of the SII above aorta, Ps- 84 bpm, rhythmic, AP- 180/120 mm Hg. What group of hypotensive medications could be additionally prescribed under consideration of the patient's age?

- A. Thiazide diuretics
- B. Loop diuretics
- C. β -adrenoceptor blockers
- D. α -adrenoceptor blockers
- E. Central sympatholytics

A 70 y.o. patient complains of weakness, dizziness, short periods of unconsciousness, pain in the cardiac area. Objectively: HR- 40 bpm, heart sounds are rhythmic, the S1 is dull, periodically amplified. AP is 180/90 mm Hg. What is the most probable cause of hemodynamic disturbances?

- A. Atrioventricular block type III
- B. Atrioventricular block type I
- C. Bradysystolic form of ciliary arrhythmia
- D. Sinus bradycardia
- E. Complete left bundle-branch block

A 39 y.o. patient complains of having dyspnea during physical activity, crus edemata, palpitation, heart intermissions. Objectively: HR is 150 bpm, atrial fibrillation. Heart is both ways enlarged. Heart sounds are muted. Liver is 6 cm below the costal margin. Echocardiogram reveals dilatation of heart chambers (end diastolic volume of left ventricle is 6,8 cm) is 29% EF, valve apparatus is unchanged. What is the most probable diagnosis?

- A. Dilated cardiomyopathy
- B. Exudative pericarditis
- C. Restrictive cardiomyopathy
- D. Hypertrophic cardiomyopathy
- E. Thyreotoxic cardiomyopathy

A patient who takes diuretics has developed arrhythmia as a result of cardiac glycoside overdose. What is the treatment tactics in this case?

- A. Increased potassium concentration in blood
- B. Increased sodium concentration in blood
- C. Reduced magnesium concentration in blood

D. Increased calcium concentration in blood

Five days after a total hip joint replacement a 72 year old woman becomes acutely short of breath, diaphoretic and hypotensive. Both lung fields are clear to auscultation and percussion, but examination of the neck reveals mild jugular venous distension with prominent A waves. Heart sounds are normal. ECG shows sinus tachycardia with a new right bundle branch block and minor nonspecific *ST – T* wave changes. The most likely diagnosis is:

- A. Pulmonary thromboembolism
- B. Acute myocardial infarction
- C. Aortic dissection
- D. Pericarditis
- E. Aspiration

A 52 year old patient with history of functional Class II angina complains of having intense and prolonged retrosternal pains, decreased exercise tolerance for 5 days. Angina is less responsive to nitroglycerine. What is the most probable diagnosis?

- A. IHD. Unstable angina
- B. Cardialgia due to spine problem
- C. IHD. Functional Class II angina
- D. Myocarditis
- E. Myocardial dystrophy

A 52 year old patient has hypervolaemic type of essential hypertension. Which of the following medications is to be prescribed either as monotherapy or in complex with other antihypertensive drugs?

- A. Hypothiazid
- B. Dibazol
- C. Clonidine
- D. Kapoten
- E. Nifedipin

A 62 year old patient complains of rest dyspnea, heart pains. 3 years ago he had myocardial infarction. Physical examination: orthopnea, acrocyanosis, swollen cervical veins. Ps - 92, total heart enlargement, the liver is enlarged by 7 cm, shin edema. What is the stage of chronic heart failure (CHF)?

- A. CHF- 2 B
- B. CHF- 1
- C. CHF- 2 A
- D. CHF- 0
- E. CHF- 3

A 60 year old man with unstable angina pectoris fails to respond to heparin, nitroglycerin, beta adrenergic blockers and calcium channel antagonist. The best management includes:

- A. Coronary artery bypass grafting
- B. Intravenous streptokinase
- C. Exercise testing
- D. Oral aspirin
- E. Antihypertensive therapy

A 42 year old woman complains of dyspnea, edema of the legs and tachycardia during minor physical exertion. Heart borders are displaced to the left and S1 is accentuated, there is diastolic murmur on apex. The liver is enlarged by 5 cm. What is the cause of heart failure?

- A. Mitral stenosis

- B. Mitral regurgitation
- C. Tricuspid stenosis
- D. Tricuspid regurgitation
- E. Aortic stenosis

Examination of a 9 month old girl revealed skin pallor, cyanosis during excitement. Percussion revealed transverse dilatation of cardiac borders. Auscultation revealed continuous systolic murmur on the left from the breastbone in the 3-4 intercostal space. This murmur is conducted above the whole cardiac region to the back. What congenital cardiac pathology can be suspected?

- A. Defect of interventricular septum
- B. Defect of interatrial septum
- C. Coarctation of aorta
- D. Fallot's tetrad
- E. Pulmonary artery stenosis

A 32 year old patient complains about cardiac irregularities, dizziness, dyspnea at physical stress. He has never suffered from this before. Objectively: Ps- 74 bpm, rhythmic. AP- 130/80 mm Hg. Auscultation revealed systolic murmur above aorta, the first heart sound was normal. ECG showed hypertrophy of the left ventricle, signs of repolarization disturbance in the I, V5 and V6 leads. Echocardiogram revealed that interventricular septum was 2 cm. What is the most probable diagnosis?

- A. Hypertrophic cardiomyopathy
- B. Aortic stenosis
- C. Essential hypertension
- D. Myocardium infarction
- E. Coarctation of aorta

After objective clinical examination a 12 year old child was diagnosed with mitral valve prolapse. What complementary instrumental method of examination should be applied for the diagnosis confirmation?

- A. Echocardiography
- B. Roentgenography of chest
- C. Phonocardiography
- D. ECG
- E. Veloergometry

A healthy 75 year old woman who leads a moderately active way of life went through a preventive examination that revealed serum concentration of common cholesterol at the rate of 5,1 millimole/l and HDL (high-density lipoproteins) cholesterol at the rate of 70 mg/dl. ECG reveals no pathology. What dietary recommendation is the most adequate?

- A. Any dietary changes are necessary
- B. Decrease of cholesterol consumption
- C. Decrease of saturated fats consumption
- D. Decrease of carbohydrates consumption
- E. Increase of cellulose consumption

A 14 year old child suffers from vegetovascular dystonia of pubertal period. He has got sympathoadrenal attack. What medicine should be used for attack reduction?

- A. Obsidan
- B. No-shpa
- C. Amysyl
- D. Aminophylline
- E. Corglicone

A 52 year old male patient complains about attacks of asphyxia, pain in his left side during respiration. These manifestations turned up all of a sudden. It is known from his anamnesis that he had been treated for thrombophlebitis of the right leg for the last month. In the admission ward the patient suddenly lost consciousness, there was a sudden attack of asphyxia and pain in his left side. Objectively: heart rate - 102/min, respiratory rate - 28/min, AP- 90/70 mm Hg. Auscultation revealed diastolic shock above the pulmonary artery, gallop rhythm, small bubbling rales above the lungs under the scapula on the right, pleural friction rub. What examination method will be the most informative for a diagnosis?

- A. Angiography of pulmonary vessels
- B. Echocardiography
- C. Study of external respiration function
- D. ECG
- E. Coagulogram

A patient has got acute macrofocal myocardial infarction complicated by cardiogenic shock. The latter is progressing under conditions of weak general peripheric resistance and lowered cardiac output. What antihypotensive drug should be injected to the patient in the first place?

- A. Dopamine
- B. Noradrenaline
- C. Adrenaline
- D. Mesatonum
- E. Prednisolone

A 54 year old female patient was admitted to the hospital with evident acrocyanosis, swollen cervical veins, enlarged liver, ascites. Cardiac borders are dilated. Heart sounds cannot be auscultated, apical beat is undetectable. AP is 100/50 mm Hg. X-ray picture of chest shows enlarged heart shadow in form of a trapezium. What pathology might have caused these symptoms?

- A. Cardiac tamponade
- B. Exudative pleuritis
- C. Complex heart defect
- D. Acute cardiac insufficiency
- E. Hiatal hernia

The patient with aquired heart failure has diastolic pressure of 0 mm Hg. What heart failure does the child have?

- A. Aortal insufficiency
- B. Mitral stenosis
- C. Aortal stenosis
- D. Mitral insufficiency
- E. Rheumatism

A young patient who came to a policlinic was diagnosed with the 1 stage of hypertension. How often should he undergo the medical check-up?

- A. Twice a year
- B. Once a year
- C. 3 times a year
- D. 4 times a year
- E. 5 times a year

A 45-year-old male patient was admitted to the intensive care unit because of myocardial infarction. An hour later the ventricular facilitation occurred. Which of the following should be administered?

- A. Defibrillation

- B. External chest compression
- C. Lidocaine injection
- D. Adrenalin injection
- E. Cardiac pacing

A 40-year-old woman who has worked in weaving branch for 10 years complains of frequent headache, sleeplessness, irritability, fatigue, tiredness. Physical examination revealed instability of blood pressure, internal organs are without changes. What is the most likely diagnosis?

- A. Noise-induced disease
- B. Hypertension
- C. Atopic bronchial asthma
- D. Asthenovegetative syndrome
- E. Encephalopathy

A 45-year-old driver was admitted to the hospital with 5 hour substernal pain. Nitroglycerin is not effective. He is pale, heart sounds are regular but weak. HR - 96 per minute, BP of 100/60mm Hg. What is the most likely diagnosis?

- A. Acute myocardial infarction
- B. Stable angina
- C. Pulmonary embolism
- D. Acute myocarditis
- E. Acute left ventricular failure

A 33-year-old man with a history of rheumatic fever complains of fever up to 38 – 39°C, abdominal pain, dyspnea, tachycardia. Heart borders are displaced to the left by 2 cm, systolic and diastolic murmurs above aorta, BP of 160/30 mm Hg. Petechial rash occurs after measurement of blood pressure. Liver is enlarged by 3 cm, spleen is palpable. Urine is brown-yellow. What is the most likely diagnosis?

- A. Infectious endocarditis
- B. Rheumatic fever
- C. Acute hepatitis
- D. Acute nephritis
- E. Aortic regurgitation

A 30-year-old patient complains of breathlessness, pain in the right rib arc region, dry cough and the edema of legs. He is ill for 2 months. He had been treated for rheumatic fever without any effect. On exam: cyanosis, edema of legs, BT of 36, 6°C, RR of 28/min, HR of 90/min, BP of 110/80mmHg, crackles above low parts of both lungs, heart borders are displaced to the left and to the right, weak sounds, systolic murmur above the apex. What is the preliminary diagnosis?

- A. Dilated cardiomyopathy
- B. Infectious endocarditis
- C. Acute myocarditis
- D. Rheumatic fever, mitral stenosis
- E. Acute pericarditis

A newborn infant has mild cyanosis, diaphoresis, poor peripheral pulse, hepatomegaly and cardiomegaly. Respiratory rate is 60 breaths per minute, and heart rate is 230 beats per minute. The child most likely has congestive heart failure caused by:

- A. Paroxysmal atrial tachycardia
- B. A ventricular septal defect and transposition of the great vessels
- C. Atrial flutter and partial atrioventricular block
- D. Hypoplastic left heart syndrome
- E. A large atrial septal defect and valvular pulmonary stenosis

Which of the following best summarizes indications for operation on an abdominal aortic aneurysm?

- A. Any aneurysm greater than 5 cm in diameter
- B. Any abdominal aortic aneurysm
- C. Only symptomatic aneurysm
- D. Only symptomatic aneurysm greater than 5 cm in diameter
- E. Only ruptured aneurysm

A 32-year-old patient complains of cardiac irregularities, dizziness, dyspnea at physical stress. He has never suffered from this before. Objectively: Ps- 74 bpm, rhythmic. AP- 130/80 mm Hg. Auscultation revealed systolic murmur above aorta, the first heart sound was normal. ECG showed hypertrophy of the left ventricle, signs of repolarization disturbance in the I, V5 and V6 leads. Echocardiogram revealed that interventricular septum was 2 cm. What is the most likely diagnosis?

- A. Hypertrophic cardiomyopathy
- B. Aortic stenosis
- C. Essential hypertension
- D. Myocardium infarction
- E. Coarctation of aorta

A 58-year-old female patient complains about periodical headache, dizziness and ear noise. She has been suffering from diabetes mellitus for 15 years. Objectively: heart sounds are rhythmic, heart rate is 76/min, there is diastolic shock above aorta, AP is 180/110 mm Hg. In urine: OD- 1,014. Daily loss of protein with urine is 1,5 g. What drug should be chosen for treatment of arterial hypertension?

- A. Inhibitor of angiotensin converting enzyme
- B. β -blocker
- C. Calcium channel antagonist
- D. Thiazide diuretic
- E. α -blocker

A 60-year-old female patient was admitted to a hospital for acute transmural infarction. An hour ago the patient's condition got worse. She developed progressing dyspnea, dry cough. Respiratory rate - 30/min, heart rate - 130/min, AP- 90/60 mm Hg. Heart sounds are muffled, diastolic shock on the pulmonary artery. There are medium moist rales in the lower parts of lungs on the right and on the left. Body temperature - 36, 4°C. What drug should be given in the first place?

- A. Promedol
- B. Aminophylline
- C. Dopamine
- D. Heparin
- E. Digoxin

A 52-year-old male patient complains about attacks of asphyxia, pain in his right side during respiration. These manifestations turned up all of a sudden. It is known from his anamnesis that he had been treated for thrombophlebitis of the right leg for the last month. In the admission ward the patient suddenly lost consciousness, there was a sudden attack of asphyxia and pain in his side. Objectively: heart rate - 102/min, respiratory rate - 28/min, AP- 90/70 mm Hg. Auscultation revealed diastolic shock above the pulmonary artery, gallop rhythm, small bubbling rales above the lungs under the scapula on the right, pleural friction rub. What examination method will be the most informative for a diagnosis?

- A. Angiography of pulmonary vessels
- B. Echocardiography
- C. Study of external respiration function
- D. ECG
- E. Coagulogram

A 56-year-old patient with diffuse toxic goiter has ciliary arrhythmia with pulse rate 110 bpm, arterial hypertension, AP- 165/90 mm Hg. What preparation should be administered along with mercazolil?

- A. Propranolol
- B. Radioactive iodine
- C. Procaine hydrochloride
- D. Verapamil
- E. Corinfar

A patient has got acute macrofocal myocardial infarction complicated by cardiogenic shock. The latter is progressing under conditions of weak general peripheral resistance and decreased cardiac output. What antihypertensive drug should be injected to the patient in the first place?

- A. Dopamine
- B. Noradrenaline
- C. Adrenaline
- D. Mesatonum
- E. Prednisolone

A boy is 8 year old. His physical development is compliant with his age. The child has had cardiac murmur since birth. Objectively: skin and visible mucous membranes are of normal colour. AP- 100/70 mm Hg. Auscultation revealed systolo-diastolic murmur and diastolic shock above the pulmonary artery. ECG shows overload of the left heart. Roentgenoscopy shows coarsening of the lung pattern, heart shadow of normal form. What is the most likely diagnosis?

- A. Atrioseptal defect
- B. Pulmonary artery stenosis
- C. Aorta coarctation
- D. Fallot's tetrad
- E. Patent ductus arteriosus

A 60-year-old patient complains about asphyxia, palpitation, rapid fatiguability. He has 8 year history of essential hypertension. Objectively: the left cardiac border is 2 cm deviated to the left from the medioclavicular line, heart sounds are rhythmic and weak; there is diastolic shock above aorta. AP- 170/100 mm Hg. Liver - +2 cm; shin pastosity is present. ECG shows deviation of cardiac axis to the left, left ventricle hypertrophy. Ejection fraction - 63%. What type of cardiac insufficiency is observed?

- A. Diastolic
- B. Systolic
- C. Combined
- D. It's a norm
- E. Unspecified

During examination at a military commissariat a 15-year-old teenager was found to have interval systolic murmur on the cardiac apex, diastolic shock above the pulmonary artery, tachycardia. Which of the supplemental examination methods will be the most informative for the diagnosis specification?

- A. Echocardiography

- B. Electrocardiography
- C. Roengenography
- D. Phonocardiography
- E. Rheography

Examination of a 9-month-old girl revealed skin pallor, cyanosis during excitement. Percussion revealed transverse dilatation of cardiac borders. Auscultation revealed continuous systolic murmur to the left of the breastbone in the 3-4 intercostal space. This murmur is conducted above the whole cardiac region to the back. What congenital cardiac pathology can be suspected?

- A. Defect of interventricular septum
- B. Defect of interatrial septum
- C. Coarctation of aorta
- D. Fallot's tetrad
- E. Pulmonary artery stenosis

A 28-year-old patient complains of periodic compressing heart pain. His brother died at the age of 34 from a cardiac disease with similar symptoms. Objectively: the patient's skin is pale. Heart borders display no significant deviations. Heart sounds are loud, there is a systolic murmur above all the points with a peak above the aorta. Echocardiography reveals thickening of the interventricular septum in the basal parts, reduction of left ventricular cavity. What drug should be administered in order to prevent the disease progression?

- A. Metoprolol
- B. Digoxin
- C. Nitroglycerin
- D. Captopril
- E. Furosemide

A 56-year-old scientist experiences constricting retrosternal pain several times a day while walking for 100-150 m. The pain lasts for up to 10 minutes and can be relieved by nitroglycerine. Objectively: the patient is overweight, heart borders exhibit no abnormalities, heart sounds are rhythmic, Ps- 78 bpm, AP- 130/80 mm Hg. ECG contains low amplitude of *T* wave in V4-5. What disease might be suspected?

- A. Stable FC III stenocardia
- B. Instable stenocardia
- C. Stable FC I stenocardia
- D. Stable FC II stenocardia
- E. Stable FC IV stenocardia

A 58-year-old female patient complains about periodical headache, dizziness and ear noise. She has been suffering from diabetes mellitus for 15 years. Objectively: heart sounds are rhythmic, heart rate is 76/min, there is diastolic shock above aorta, AP is 180/110 mm Hg. In urine: OD- 1,014. Daily loss of protein with urine is 1,5 g. What drug should be chosen for treatment of arterial hypertension?

- A. Inhibitor of angiotensin converting enzyme
- B. β -blocker
- C. Calcium channel antagonist
- D. Thiazide diuretic
- E. α -blocker

A 60-year-old female patient was admitted to a hospital for acute transmural infarction. An hour later the patient's condition got worse. She developed progressing dyspnea, dry cough.

Respiratory rate - 30/min, heart rate - 130/min, AP- 90/60 mm Hg. Heart sounds were muffled, there was also diastolic shock on the pulmonary artery. The patient presented with medium moist rales in the lower parts of lungs on the right and on the left. Body temperature - 36, 4°C. What drug should be given in the first place?

- A. Promedol
- B. Aminophylline
- C. Dopamine
- D. Heparin
- E. Digoxin

A 62-year-old male has been hospitalized in the intensive care unit with a continuous attack of retrosternal pain that cannot be relieved by nitroglycerin. Objectively: AP- 80/60 mm Hg, heart rate - 106/min, breathing rate - 22/min. Heart sounds are muffled, a gallop rhythm is present. How would you explain the AP drop?

- A. Reduction in cardiac output
- B. Reduction in peripheral resistance
- C. Blood depositing in the abdominal cavity
- D. Adrenergic receptor block
- E. Internal haemorrhage

A 56-year-old patient with diffuse toxic goiter has ciliary arrhythmia with pulse rate of 110 bpm, arterial hypertension, AP- 165/90 mm Hg. What preparation should be administered along with mercazolil?

- A. Propranolol
- B. Radioactive iodine
- C. Procaine hydrochloride
- D. Verapamil
- E. Corinfar

A 46-year-old patient complains of sudden palpitation, which is accompanied by pulsation in the neck and head, fear, nausea. The palpitation lasts for 15-20 minutes and is over after straining when holding her breath. What kind of cardiac disorder may be suspected?

- A. An attack of supraventricular paroxysmal tachycardia
- B. An attack of ventricular paroxysmal tachycardia
- C. An attack of atrial flutter
- D. An attack of ciliary arrhythmia
- E. An attack of extrasystolic arrhythmia

A 40-year-old female patient complain of headache, dizziness, muscle weakness, sometimes - cramps in the extremities. She has been taking antihypertensive medications for 10 years. AP- 180/100 mm Hg. Blood potassium - 1,8 millimole/l, sodium - 4,8 millimole/l. In urine: alkaline reaction, the relative density - 1012, protein and sugar are not found, WBCs - 3-4 in the field of vision, RBCs - 1- 2 in the field of vision. Conn's syndrome is suspected. Which drug should be chosen for the treatment of arterial hypertension?

- A. Spironolactone
- B. Propanolol
- C. Enalapril
- D. Hydrochlorothiazide
- E. Clonidine

A 20 year-old patient complains of nosebleeds, numbness of the lower extremities. Objectively: hyperaemia of face, on the upper extremities AP is 160/90 mm Hg, and 80/50 mm Hg on the

lower ones. Pulse on the popliteal and pedal arteries is of poor volume, there is systolic murmur over the carotid arteries. What is the most likely diagnosis?

- A. Aorta coarctation
- B. Dissecting aortic aneurysm
- C. Aortopulmonary window
- D. Ventricular septal defect
- E. Atrial septal defect

Examination of a 35-year-old patient with rheumatism revealed that the right heart border was 1 cm displaced outwards from the right parasternal line, the upper border was on the level with inferior margin of the 1st rib, the left border was 1 cm in from the left midclavicular line. Auscultation revealed atrial fibrillation, loud apical first sound, diastolic shock above the pulmonary artery. Echocardiography revealed abnormal pattern of the mitral valvemotion. What heart disease is characterized by these symptoms?

- A. Mitral stenosis
- B. Mitral valve prolapse
- C. Mitral valve insufficiency
- D. Aortic stenosis
- E. Tricuspid valve insufficiency

A 13-year-old boy with hypertrophic cardiomyopathy complains of dyspnea on minimal exertion. EchoCG reveals asymmetric left ventricular hypertrophy, signs of pulmonary hypertension, dilatation of the left atrium. EF is 64%. The revealed alterations are indicative of:

- A. Diastolic heart failure
- B. Systolic heart failure
- C. Primary pulmonary hypertension
- D. Primary arterial hypertension
- E. Symptomatic arterial hypertension

A 76-year-old male consulted a therapist about slow discharge of urine with a small jet. The patient reported no cardiac problems. Examination revealed atrial fibrillation with a heart rate of 72/min and without pulse deficit. There are no signs of heart failure. ECG confirms the presence of atrial fibrillation. From history we know that the arrhythmia was detected three years ago. What tactics for the treatment of atrial fibrillation in the patient should be chosen?

- A. Does not require treatment
- B. Digoxin
- C. Verapamil
- D. Obzidan
- E. Ajmaline

3 hours before, a 68-year-old male patient got a searing chest pain radiating to the neck and left forearm, escalating dyspnea. Nitroglycerin failed to relieve pain but somewhat reduced dyspnea. Objectively: there is crimson cyanosis of face. Respiratory rate is 28/min. The patient has vesicular breathing with isolated sibilant rales. Heart sounds are muffled, with a gallop rhythm. Ps- 100/min, AP- 100/65 mm Hg. ECG shows negative T-wave in V2–V6 leads. What drug can reduce the heart's need for oxygen without aggravating the disease?

- A. Isosorbide dinitrate
- B. Corinfar
- C. Atenolol

- D. Streptokinase
- E. Aminophylline

A 30-year-old female patient has been delivered to a hospital for sudden dyspnea progressing to asthma, sensation of having a "lump in the throat", hand tremor, fear of death. The attack has developed for the first time and is associated with a strong emotion. There is no previous history. Objectively: respiratory rate - 28/min, Ps- 104/min, rhythmic, AP- 150/85 mm Hg. The patient has rapid superficial vesicular breathing with extended expiration. Percussion findings: heart borders are not changed. Cardiac sounds are loud, rhythmic. What is the most likely diagnosis?

- A. Neurocirculatory asthenia
- B. Bronchial asthma
- C. Hypertensive crisis
- D. Cardiac asthma
- E. Thyrotoxic crisis

A 42-year-old male patient with essential hypertension presents with headache, palpitations, unexplained fear. Objectively: Ps-100/min, AP- 200/100 mm Hg, the left border of cardiac dullness is displaced by 1,5 cm to the left, vesicular breathing is present. ECG shows sinus tachycardia, signs of left ventricular hypertrophy. What drug should be administered as an emergency?

- A. Obzidan
- B. Dibazol
- C. Reserpine
- D. Magnesium sulfate
- E. Furosemide

A 43-year-old female patient complains of dyspnea, swelling of legs, abdomen enlargement, pricking heart pain. She has a history of tuberculous bronchadenitis, quinsies. The patient's condition deteriorated 6 months ago. Objectively: cyanosis, bulging neck veins, vesicular breathing. Heart borders are not displaced. Heart sounds are muffled, Ps- 106/min, liver is +4 cm, ascites is present. Low voltage on the ECG has been revealed. Radiograph shows a thin layer of calcium deposits along the left contour of heart. What treatment should be recommended to the patient?

- A. Treatment by a cardiac surgeon
- B. Digitalis preparations
- C. Anti-TB drugs
- D. Diuretics
- E. Vasodilators, nitrates

A 26-year-old female patient has an 11-year history of rheumatism. Four years ago she suffered 2 rheumatic attacks. Over the last 6 months there have been paroxysms of atrial fibrillation every 2-3 months. What option of antiarrhythmic therapy or tactics should be proposed?

- A. Prophylactic administration of cordarone
- B. Immediate hospitalization
- C. Defibrillation
- D. Lidocaine administration
- E. Heparin administration

A 10-year-old child with a history of nonrheumatic carditis has periodic attacks manifested by heart pain, dyspnea, pallor, high blood pressure, a dramatic increase in heart rate up to 180/min. What drug would be most effective to treat this patient?

- A. Obsidan
- B. Procainamide
- C. Lidocaine
- D. Verapamil
- E. Ajmaline

A 47-year-old male patient has been lately complaining of compressing chest pain that occurs when he walks a distance of 700-800 m. Once a week, he drinks 2 liters of beer. Rise in arterial pressure has been observed for the last 7 years. Objectively: Ps- 74/min, AP- 120/80 mm Hg. The bicycle ergometry performed at workload of 75 watts shows 2mmST-segment depression in V4-V6 leads. What is the most likely diagnosis?

- A. Exertional stenocardia, II functional class
- B. Exertional stenocardia, III functional class
- C. Exertional stenocardia, IV functional class
- D. Vegetative-vascular dystonia of hypertensive type
- E. Alcoholic cardiomyopathy

Examination of an 11-year-old boy revealed frequent nosebleeds, fatigue when walking, underdevelopment of the lower half of the body, increased blood pressure in the upper extremities and decreased pressure in the lower ones, extension of the left heart border, blowing systolic murmur in the interscapular region. ECG shows the horizontal axis of heart.

Radiography reveals left cardiomegaly, costal usuration. What is the most likely diagnosis?

- A. Aortarctia
- B. Aortic stenosis
- C. Patent ductus arteriosus
- D. Ventricular septal defect
- E. Atrial septal defect

During the preventive examination a 17-year-old young man reports no health problems. Objectively: the patient is undernourished, asthenic; blood pressure is 110/70 mm Hg, Ps- 80/min. Heart borders are within normal range. Auscultation reveals three apical heart sounds, murmurs are absent. ECG shows no pathological changes, PCG registers the S3 occurring 0,15 seconds after the S2. How can you interpret these changes?

- A. Physiologic S3
- B. Fout-ta-ta-rou (three-component rhythm)
- C. Protodiastolic gallop rhythm
- D. Presystolic gallop rhythm
- E. Physiologic S4

A week before, a 65-year-old male patient suffered an acute myocardial infarction. His general condition has deteriorated: he complains of dyspnea at rest, pronounced weakness. Objectively: edema of the lower extremities, ascites is present. Heart borders are extended, paradoxical pulse is 2 cm displaced from the apex beat to the left. What is the most likely diagnosis?

- A. Acute cardiac aneurysm

- B.Recurrent myocardial infarction
- C.Acute pericarditis
- D.Cardiosclerotic aneurysm
- E.Pulmonary embolism

A 29-year-old female patient complains of dyspnea and palpitations on exertion. According to her mother, as a child she had heart murmur, did not undergo any examinations. Objectively: the patient has pale skin, Ps- 94/min, rhythmic. AP- 120/60 mm Hg. In the II intercostal space on the left auscultation reveals a continuous rasping systolodiastolic murmur, diastolic shock above the pulmonary artery. Blood and urine are unremarkable. What is the most likely diagnosis?

- A.Patent ductus arteriosus
- B.Atrial septal defect
- C.Ventricular septal defect
- D.Aortarctia
- E.Tetralogy of Fallot

A 67-year-old female patient with hypertensive crisis has asthma, cough with expectoration of frothy pink sputum, moist rales in the lungs. The patient stays in sitting position, respiratory rate is 40/min, AP-214/136 mm Hg, heart rate - 102/min. What is the most rational tactics of this patient management?

- A.Intravenous administration of furosemide
- B.Urgent pneumography
- C.Bed rest, lying position
- D.Intravenous administration of $\alpha\beta$ -blocker
- E.Tactics can be determined after ECG and chest radiography

A 63-year-old male patient with persistent atrialfibrillation complains of moderate dyspnea. Objectively: peripheral edemata are absent, vesicular breathing is present, heart rate - 72/min, AP- 140/90mmHg. What combi-nation of drugs will be most effective for the secondary prevention of heart failure?

- A.Beta-blockers, ACE inhibitors
- B.Beta-blockers, cardiac glycosides
- C.Cardiac glycosides, diuretics
- D.Cardiac glycosides, ACE inhibitors
- E.Diuretics, beta-blockers

A 57-year-old male patient had an attack of retrosternal pain that lasted more than 1,5 hours. Objectively: the patient is inert,adynamic, has pale skin, cold extremities, poor volume pulse, heart rate - 120/min, AP- 70/40 mm Hg. ECG shows ST elevation in II, III, aVF leads. What condition are these changes typical for?

- A.Cardiogenic shock
- B.Arrhythmogenic shock
- C.Perforated gastric ulcer
- D.Acute pericarditis
- E.Acute pancreatitis

During the ultrasound study of carotid and vertebral arteries a 74-year-old patient developed a condition manifested by dizziness, weakness, nausea, transient loss of consciousness.

Objectively: pale skin, AP-80/60 mm Hg, Ps- 96/min of poor volume. ECG shows sinus tachycardia, left ventricular hypertrophy. Focal neurological symptoms were not found. What is the provisional diagnosis?

- A. Carotid sinus syncope
- B. Orthostatic syncope
- C. Morgagni-Adams-Stokes attack
- D. Complete atrioventricular block
- E. Acute cerebrovascular accident

A 47-year-old male patient complains of compressive chest pain that occurs both at rest and during light physical activity; irregular heartbeat. These problems arose 3 months ago. The patient's brother died suddenly at the age of 30. Objectively: Ps- 84/min, arrhythmic, AP- 130/80 mm Hg. ECG confirms signs of left ventricular hypertrophy, abnormal Q-waves in V4–V6 leads. EchoCG reveals that interventricular septum is 1,7 cm, left ventricular wall thickness is 1,2 cm. What is the most likely diagnosis?

- A. Hypertrophic cardiomyopathy
- B. Neurocirculatory asthenia
- C. Exertional angina
- D. Myocarditis
- E. Pericarditis

A 13-year-old girl complains of periodic prickly pain in the heart region. Percussion revealed no changes of cardiac borders. Auscultation revealed arrhythmic enhanced heart sounds, extrasystole at the 20-25 cardiac impulse. ECG showed the sinus rhythm, impaired repolarization, single upraventricular extrasystoles at rest. What is the most likely diagnosis?

- A. Vegetative-vascular dysfunction
- B. Rheumatism
- C. Nonrheumatic carditis
- D. Myocardial degeneration
- E. Intoxication syndrome

A 57-year-old male patient complains of dyspnea on exertion, heaviness in the right hypochondrium and shin edemata towards evening. Objectively: temperature - 38,1°C, HR- 20/min, HR=Ps=92/min, AP- 140/90 mm Hg. There is apparent kyphoscoliosis. In the lungs single dry rales can be auscultated. Heart sounds are muffled, rhythmic. ECG: Rv1+Sv5=15 mm. X-ray picture shows the bulging of pulmonary artery cone, right ventricle enlargement. What is the most likely cause of this condition?

- A. Pulmonary heart
- B. Atherosclerotic cardiosclerosis
- C. Dilatation cardiomyopathy
- D. Mitral stenosis
- E. Primary pulmonary hypertension

A 40-year-old woman with a history of combined mitral valve disease with predominant stenosis complains of dyspnea, asthma attacks at night, heart problems. At present, she is unable to do easy housework. What is the optimal tactics of the patient treatment?

- A. Mitral commissurotomy
- B. Implantation of an artificial valve

- C. Antiarrhythmia therapy
- D. Treatment of heart failure
- E. Antirheumatic therapy

A 25-year-old patient complains of having dull heart pain for the last 10 days, dyspnea on mild exertion, palpitations. The disease developed 2 weeks ago after a respiratory infection. Objectively: acrocyanosis, AP- 90/75 mm Hg, Ps-96/min. Cardiac borders appear to be shifted to the left and right. Heart sounds are weak and have triple rhythm, there is systolic murmur at the apex. ECG showed sinus rhythm, complete left bundle branch block. What is the most likely diagnosis?

- A. Infectious-allergic myocarditis
- B. Exudative pericarditis
- C. Infective endocarditis
- D. Myocarditic cardiosclerosis
- E. Vegetative-vascular dystonia

A 59-year-old male complains of heart pain, cough, fever up to 38°C. Three weeks ago he suffered a heart attack. Objectively: Ps- 86/min, rhythmic, blood pressure - 110/70 mm Hg. Auscultation reveals pericardial rub, rales beneath the shoulder blade. Radiography reveals no pathology. Blood count: WBCs - $10 \cdot 10^9/l$, ESR - 35 mm/h. ECG shows no dynamics. It would be most reasonable to administer the drugs of the following pharmaceutical group:

- A. Glucocorticoids
- B. Antibiotics
- C. Direct anticoagulants
- D. Nitrates and nitrites
- E. Fibrinolytics

A 53-year-old female patient complains of cardiac pain and rhythm intermissions. She has experienced these presentations since childhood. The patient's father had a history of cardiac arrhythmias. Objectively: the patient is in grave condition, Ps- 220 bpm, AP- 80/60 mm Hg. ECG results: heart rate - 215/min, extension and deformation of QRS complex accompanied by atrioventricular dissociation; positive P wave. Some time later heart rate reduced down to 45/min, there was a complete dissociation of P wave and QRST complex. Which of the following will be the most effective treatment?

- A. Implantation of the artificial pacemaker
- B. β -adrenoreceptor blocking agents
- C. Cholinolytics
- D. Calcium antagonists
- E. Cardiac glycosides

A 14-year-old boy with a history of chronic tonsillitis and sinusitis has developed a feeling of heart irregularities and additional pulse. HR- 83/min. ECG results: regular impulses with no visible P wave that occur every two sinus contractions, QRS complex is dramatically deformed and prolonged to over 0,11 s, T wave is discordant followed by a complete compensatory pause. Specify the arrhythmia type:

- A. Trigeminal extrasystole
- B. Bigeminal extrasystole
- C. Partial AV-blockade

- D. Complete AV-block
- E. Left bundle branch block

An 8-year-old girl periodically has sudden short-term heart pain, sensation of chest compression, epigastric pain, dizziness, vomiting. Objectively: the patient is pale, respiratory rate - 40/min, jugular pulse is present. Ps- 185 bpm, of poor volume. AP- 75/40 mm Hg. ECG taken during an attack shows ectopic P waves, QRS wave is not deformed. At the end of an attack a compensatory pause is observed. The most likely cause of the attack is:

- A. Paroxysmal atrial tachycardia
- B. Sinus tachycardia
- C. Paroxysmal ventricular tachycardia
- D. Complete AV-block
- E. Atrial fibrillation

After myocardial infarction, a 50-year-old patient had an attack of asthma. Objectively: bubbling breathing with frequency of 32/min, cough with a lot of pink frothy sputum, acrocyanosis, swelling of the neck veins. Ps- 108/min, AP- 150/100 mm Hg. Heart sounds are muffled. Mixed moist rales can be auscultated above the entire lung surface. What drug would be most effective in this situation?

- A. Nitroglycerin intravenously
- B. Pentamin intravenously
- C. Strophanthin intravenously
- D. Dopamine intravenously
- E. Aminophylline intravenously

4 weeks after myocardial infarction a 56-year-old patient developed acute heart pain, pronounced dyspnea. Objectively: the patient's condition is extremely grave, there is marked cyanosis of face, swelling and throbbing of neck veins, peripheral pulse is absent, the carotid artery pulse is rhythmic, 130 bpm, AP is 60/20 mm Hg. Auscultation of heart reveals extremely muffled sounds, percussion reveals heart border extension in both directions. What is the optimal treatment tactic for this patient?

- A. Pericardiocentesis and immediate thoracotomy
- B. Oxygen inhalation
- C. Puncture of the pleural cavity on the left
- D. Conservative treatment, infusion of adrenomimetics
- E. Pleural cavity drainage

A 58-year-old patient complains of a headache in the occipital region, nausea, choking, opptentes. The presentations appeared after a physical exertion. Objectively: the patient is excited. Face is hyperemic. Skin is pale. Heart sounds are regular, the 2nd aortic sound is accentuated. AP- 240/120 mm Hg, HR-92/min. Auscultation reveals some fine moist rales in the lower parts of the lungs. Liver is not enlarged. ECG shows signs of hypertrophy and left ventricular overload. What is the most likely diagnosis?

- A. Complicated hypertensive crisis, pulmonary edema
- B. Acute myocardial infarction, pulmonary edema
- C. Bronchial asthma exacerbation
- D. Uncomplicated hypertensive crisis
- E. Community-acquired pneumonia

Six months ago, a 5-year-old child was operated for CHD. For the last 3 weeks he has complained of fever, heart pain, aching muscles and bones. Examination results: "white-coffee" skin colour, auscultation revealed systolic murmur in the region of heart along with a noise in the III-IV intercostal space. Examination of fingertips revealed Janeway lesions. What is your provisional diagnosis?

- A. Infectious endocarditis
- B. Sepsis
- C. Nonrheumatic carditis
- D. Acute rheumatic fever
- E. Typhoid fever

A week ago a 65-year-old patient suffered an acute myocardial infarction, his general condition deteriorated: he complains of dyspnea at rest, pronounced weakness. Objectively: edema of the lower extremities, ascites is present. Heart borders are extended, paradoxical pulse is 2 cm displaced from the apex beat to the left. What is the most likely diagnosis?

- A. Acute cardiac aneurysm
- B. Recurrent myocardial infarction
- C. Acute pericarditis
- D. Cardiosclerotic aneurysm
- E. Pulmonary embolism

A 19-year-old patient complains of dyspnea on exertion. He often has bronchitis and pneumonia. Since childhood, the patient presents with cardiac murmur. Auscultation revealed splitting of the II sound above the pulmonary artery, systolic murmur in 3 intercostal space at the left sternal border. ECG showed right bundle branch block. What is the provisional diagnosis?

- A. Atrial septal defect
- B. Open ductus arteriosus
- C. Aortarctia
- D. Aortic stenosis
- E. Mitral insufficiency

A 63-year-old patient with persistent atrial fibrillation complains of moderate dyspnea. Objectively: peripheral edema are absent, vesicular respiration is present, heart rate - 72/min, AP- 140/90 mm Hg. What combination of drugs will be most useful in the secondary prevention of heart failure?

- A. Beta-blockers, ACE inhibitors
- B. Beta-blockers, cardiac glycosides
- C. Cardiac glycosides, diuretics
- D. Cardiac glycosides, ACE inhibitors
- E. Diuretics, beta-blockers

A 57-year-old patient had an attack of retrosternal pain that lasted more than 1,5 hours. Objectively: the patient is inert, adynamic, has pale skin, cold extremities, poor volume pulse, heart rate - 120/min, AP- 70/40 mm Hg. ECG shows ST elevation in leads II, III, aVF. What condition are these changes typical for?

- A. Cardiogenic shock
- B. Arrhythmogenic shock

- C.Perforated gastric ulcer
- D.Acute pericarditis
- E.Acute pancreatitis

A 70-year-old patient consulted a doctor about arrhythmic cardiac activity, dyspnea. Objectively: AP- 150/90 mm Hg, extrasystole arrhythmia (10-12 beats per minute), left ventricular systolic dysfunction (ejection fraction at the rate of 42%). Which of antiarrhythmic drugs should be administered as initial therapy in this case?

- A.Amiodarone
- B.Flecainide
- C.Encainide
- D.Moracizine
- E.Digoxin

During dynamic investigation of a patient the increase of central venous pressure is combined with the decrease of arterial pressure. What process is proved by such combination?

- A.Developing of cardiac insufficiency
- B.Depositing of blood in venous channel
- C.Shunting
- D.Presence of hypervolemia
- E.Increase of bleeding speed

A 56-year-old scientist experiences constricting retrosternal pain several times a day while walking for 100-150 m. The pain lasts for up to 10 minutes and can be relieved by nitroglycerine. Objectively: the patient is overweight, heart borders exhibit no abnormalities, heart sounds are rhythmic, Ps- 78 bpm, AP- 130/80 mm Hg. ECG contains low amplitude of Twave in V4-5. What disease might be suspected?

- A.Stable FC III stenocardia
- B.Instable stenocardia
- C.Stable FC I stenocardia
- D.Stable FC II stenocardia
- E.Stable FC IV stenocardia

A 58-year-old female patient complains about periodical headache, dizziness and ear noise. She has been suffering from diabetes mellitus for 15 years. Objectively: heart sounds are rhythmic, heart rate is 76/min, there is diastolic shock above aorta, AP is 180/110 mm Hg. In urine: OD- 1,014. Daily loss of protein with urine is 1,5 g. What drug should be chosen for treatment of arterial hypertension?

- A. Inhibitor of angiotensin converting enzyme
- B.β-blocker
- C.Calcium channel antagonist
- D.Thiazide diuretic
- E.α-blocker

A 5-year-old child had an attack of palpitation with nausea, dizziness, generalized fatigue. On ECG: tachycardia with heartbeat rate of 220/min. Ventricle complexes are deformed and widened. P wave is absent. What medication is to be prescribed to provide first aid?

- A.Lydocain

- B. Isoptin
- C. Seduxen
- D. Novocainamides
- E. Strophantin

A 57-year-old man complains of shortness of breath, swelling on shanks, irregularity in cardiac work, pain in the left chest half with irradiation to the left scapula. Treatment is ineffective. On physical exam: heart's sounds are diminished, soft systolic murmur on the apex. Ps - 100/min, arrhythmical, BP - 115/75 mm Hg. The liver is +2 cm, painful. Roentgenoscopy: enlargement of heart shadow to all sides, pulsation is weak. Electrocardiogram (ECG): left ventricular extrasystolia, decreased voltage. What method of investigation is necessary to do to determine the diagnosis?

- A. Echocardiography
- B. Velocimetria
- C. X-ray kymography
- D. ECG in the dynamics
- E. Coronarography

A 60-year-old female patient had been admitted to a hospital for acute transmural infarction. An hour later the patient's condition got worse. She developed progressing dyspnea, dry cough. Respiratory rate - 30/min, heart rate - 130/min, AP- 90/60 mm Hg. Heart sounds were muffled, there was also diastolic shock on the pulmonary artery. The patient presented with medium moist rales in the lower parts of lungs on the right and on the left. Body temperature - 36.4°C.

What drug should be given in the first place?

- A. Promedol
- B. Aminophylline
- C. Dopamine
- D. Heparin
- E. Digoxin

A 67-year-old male complains of dyspnea on exertion, attacks of retrosternal pain, dizziness. He has no history of rheumatism. Objectively: pale skin, acrocyanosis. There are rales in the lower parts of lungs. There is systolic thrill in the II intercostal space on the right, coarse systolic murmur conducted to the vessels of neck. AP- 130/90 mm Hg, heart rate - 90/min, regular rhythm. The liver extends 5 cm under the edge of costal arch, shin edemata are present. Specify the assumed valvular defect:

- A. Aortic stenosis
- B. Pulmonary artery stenosis
- C. Mitral insufficiency
- D. Ventricular septal defect
- E. Tricuspid regurgitation

An 18-year-old patient presents no problems. Percussion reveals that heart borders are displaced to the right and left by 1 cm, there is a coarse systolic murmur with its epicenter within the 4th intercostal space on the left. What is the most informative examination to confirm the clinical diagnosis?

- A. Ventriculography

- B.ECG
- C.PCG
- D.Echocardiography
- E.Polycardiography

An 8-year-old girl periodically has sudden short-term heart pain, sensation of chest compression, epigastric pain, dizziness, vomiting. Objectively: the patient is pale, respiratory rate - 40/min, jugular pulse is present. Ps- 185 bpm, of poor volume. AP- 75/40 mm Hg. ECG taken during an attack shows ectopic Pwaves, QRSwave is not deformed. At the end of an attack a compensatory pause is observed. The most likely cause of the attack is:

- A.Paroxysmal atrial tachycardia
- B.Sinus tachycardia
- C.Paroxysmal ventricular tachycardia
- D.Complete AV-block
- E.Atrialfibrillation

A 58-year-old patient complains of a headache in the occipital region, nausea, choking, opplotentes. The presentations appeared after a physical exertion. Objectively: the patient is excited. Face is hyperemic. Skin is pale. Heart sounds are regular, the 2nd aortic sound is accentuated. AP- 240/120 mm Hg, HR-92/min. Auscultation reveals some fine moisr rales in the lower parts of the lungs. Liver is not enlarged. ECG shows signs of hypertrophy and left ventricular overload. What is the most likely diagnosis?

- A.Complicated hypertensive crisis
- B.Acute myocardial infarction, pulmonary edema
- C.Bronchial asthma exacerbation
- D.Uncomplicated hypertensive crisis
- E.Community-acquired pneumonia

The condition of a 3-year-old child with acute non-rheumatic myocarditis has suddenly deteriorated: he presents with anxiety, acrocyanosis, peripheral edemata, dyspnea. Auscultation of lungs reveals fine moist rales on both sides mainly in the lower parts. AP- 65/40 mm Hg. HR- 150/min, heart sounds are muffled, arrhythmic (extrasystole). Liver is +4 cm. Oliguria is present. The child has been diagnosed with acute heart failure. Which method of examination is most informative for assessing the child's status dynamics?

- A.Echocardiography
- B.ECG
- C.Diuresis monitoring
- D.Monitoring of K⁺,Na⁺concentrationin blood
- E.24-hour monitoring of heart rhythm

A56-year-old patient was undergoing a surgery for suture repair of perforated ulcer. During the operation the cardiomonitor registered ventricularfibrillation. The first-priority measure should be:

- A.Electrical defibrillation
- B.Injection of adrenalin
- C.Injection of lidocaine
- D.Injection of atropine
- E.Injection of calcium chloride

Routine examination of a 16-year-old boy revealed the presence of three heart sounds on auscultation. The third sound is low and occurs in early diastole, there is no additional murmur. In history: pneumonia six months ago. The patient presents no problems. Examination revealed hyposthenia, underdevelopment of muscles. Laboratory and instrumental studies revealed no peculiarities. What is the origin of the additional heart sound?

- A. Physiological III sound
- B. The sound of the mitral valve opening
- C. Protodiastolic gallop rhythm
- D. Pericardial diastolic sound
- E. The sound of the tricuspid valve opening