CONFIRMED

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Study agenda for 2026/2027 academic year
internal medicine for 4th year student
of the faculty of training for foreign countries

1. **Arterial hypertension. Symptomatic arterial hypertension. History, subject and objectives of the academic discipline. Organization of therapeutic care in the Republic of Belarus.**

The subject and objectives of the academic discipline "Internal diseases", it relation to other branches of medicine. Rules of medical ethics and deontology. The main therapeutic schools in the Republic of Belarus. Stages of therapy development. Organization of therapeutic care in the Republic of Belarus. Principles of evidence-based management of therapeutic pathology.

Arterial hypertension (AH). Definition of the concept. Medical and social significance of the problem. Etiology and pathogenesis of essential hypertension. Risk factors for hypertension. Classification of the degrees of increase in blood pressure (BP). The defeat of "target organs". Conditions associated with hypertension. Risk stratification and prognosis in hypertension. Scheme of examination of a patient with hypertension. Principles of hypertension treatment: physical activity, diet, main and additional groups of antihypertensive drugs, preferred drug combinations. Diagnosis and treatment of diseases characterized by high blood pressure in pregnant women. Complications of hypertension. Prognosis for hypertension. Prevention of hypertension.

Hypertensive crises: definition, classification, clinical manifestations of various options, basic principles of treatment (relief of crises).

Symptomatic arterial hypertension. Classification of symptomatic hypertension: renal (parenchymal, renovascular), endocrine (thyrotoxic, with Itsenko-Cushing's syndrome, pheochromocytoma, Conn's syndrome), hemodynamic (coarctation of the aorta, arterial atherosclerosis, aortic valve insufficiency), cerebral. Features of clinical manifestations, diagnosis and differential diagnosis of symptomatic hypertension. Therapeutic tactics for symptomatic hypertension.

2. Atherosclerosis. Cardiac ischemia. Angina pectoris.

Atherosclerosis. Etiology and pathogenesis of atherosclerosis. Formation of atherosclerotic plaque. Risk factors for the development of atherosclerosis. Types of hyperlipidemia. Clinical manifestations and diagnostics of atherosclerosis, depending on its preferential localization (aorta, heart vessels, brain, limbs, kidneys, intestines). Methods for detecting atherosclerotic plaques: coronary angiography, CT, MRI, multislice computed tomography. The principles of treatment of atherosclerosis, depending on the degree of risk of developing cardiovascular diseases and the type of hyperlipidemia: lifestyle modification, hypolipidemic diet, physical activity, drugs that normalize lipid metabolism, statins. Primary and secondary prevention of atherosclerosis. Indications for surgical treatment of atherosclerosis, including the use of endovascular techniques.

Coronary artery disease (CHD). Medical and social significance of the problem of ischemic heart disease. Etiology and pathogenesis of ischemic heart disease. The role of stenosing atherosclerosis of the coronary arteries, vasospastic factor and thrombosis in the development of coronary artery disease. Clinical forms of ischemic heart disease (WHO classification). Instrumental methods for the diagnosis of coronary insufficiency: ECG, stress and pharmacological tests, radionuclide study, coronary angiography. Definition of "sudden

cardiac death". Resuscitation algorithm in cardiology. Diagnostic criteria for atherosclerotic cardiosclerosis. High-tech methods of surgical treatment of coronary artery disease: coronary artery bypass grafting, angioplasty and stenting. Prognosis for ischemic heart disease.

Angina pectoris. Classification of angina pectoris. Pathogenesis and characteristics of pain syndrome in angina pectoris. Functional classes of exertional angina. Diagnostic criteria and clinical variants of unstable angina pectoris: new-onset, progressive, spontaneous, early post-infarction, after a successful coronary artery bypass grafting or balloon angioplasty. Atypical clinical manifestations of angina pectoris. Painless myocardial ischemia. Differential diagnosis of angina pectoris. Principles of angina pectoris treatment: medicines that affect the symptoms and prognosis of the disease; groups of antianginal drugs; drugs that improve microcirculation and myocardial metabolism. Relief of an attack of angina pectoris. Organizational and therapeutic tactics for stable and unstable angina pectoris, possible outcomes.

3. Acute coronary syndrome. Myocardial infarction.

Acute coronary syndrome: definition, clinical manifestations, diagnosis, medical tactics in acute coronary syndrome with / without ST segment elevation. Differentiated treatment of acute coronary syndrome. Revascularization of the coronary arteries. Prevention of acute coronary syndrome.

Myocardial infarction: risk factors, pathogenetic mechanisms of development of myocardial necrosis, typical and atypical clinical variants of the onset of the disease, characteristics of pain syndrome, grades of severity of myocardial infarction, periods of myocardial infarction. Laboratory and instrumental methods for diagnosing myocardial infarction: ECG, echocardiography (EchoCG), scintigraphy, radionuclide ventriculography, coronary angiography. Electrocardiographic diagnostics of myocardial infarction: by the depth of the lesion, localization, periods. Biochemical markers of myocardial damage. Differential diagnosis of myocardial infarction.

Complications of myocardial infarction in acute and subacute periods: cardiogenic shock, arrhythmias, acute left ventricular failure, progressive chronic heart failure, acute and chronic heart aneurysm, cardiac tamponade, postinfarction syndrome, thromboendocarditis. The principles of treatment of acute myocardial infarction: relief of pain syndrome, reperfusion of the affected artery, limitation of the zone of ischemic injury, prevention of complications. Indications and contraindications for thrombolysis. Provision of medical care for myocardial infarction at the pre-hospital stage. Emergency medical care for complications of myocardial infarction. Features of treatment in different periods of myocardial infarction. Indications for surgical treatment of myocardial infarction. Forecast for myocardial infarction. Principles of physical and mental rehabilitation of patients after myocardial infarction. Primary and secondary prevention of myocardial infarction.

4. Insufficiency of blood circulation (fainting, collapse, acute and chronic heart failure).

Acute vascular insufficiency (fainting, collapse): causes, the difference between fainting and collapse, diagnosis and emergency medical care.

Acute heart failure (left ventricular cardiac asthma and pulmonary edema) and right ventricular (acute cor pulmonale)): causes, pathogenesis, pathophysiology, clinical manifestations. Instrumental diagnostics of acute heart failure: EchoCG, ECG, chest x-ray, contrast-enhanced CT, angiography. Emergency medical care for acute heart failure at the prehospital stage and in hospital. The prognosis for acute heart failure. acute heart failure Prevention of acute heart failure.

Chronic heart failure (CHF): epidemiology, etiology, pathogenesis, classification (Strazhesko-Vasilenko and New York Heart Association - NYHA), criteria for diastolic and systolic myocardial dysfunction. Clinical manifestations of CHF by stages (functional classes). Instrumental diagnostics of CHF, 6-minute walk test. Brain natriuretic peptide. CHF treatment: instrumental methods, drug therapy (basic, additional and auxiliary drugs), hardware and

surgical treatment (revascularization, resynchronization therapy, implantable cardioverter defibrillators, heart transplantation, plasma ultrafiltration). Forecast for CHF. CHF prevention.

5. Pulmonary embolism (PE). Pulmonary hypertension. Pulmonary heart.

PE: risk factors, causes and mechanisms of development, classification, clinical manifestations, diagnosis, differential diagnosis, emergency medical care. Principles of treatment depending on the risk of early death from PE. Primary and secondary prevention of PE.

Pulmonary hypertension: concept, mechanisms of development, risk factors. Clinical classification: pulmonary arterial hypertension; pulmonary hypertension due to diseases of the left heart; pulmonary hypertension associated with lung disease and / or hypoxia; chronic thromboembolic pulmonary hypertension; pulmonary hypertension with multifactorial or unknown mechanisms. Clinical and instrumental diagnostics of pulmonary hypertension: ECG, ultrasound of the heart and blood vessels, chest x-ray, respiratory function, ventilation-perfusion lung scan, high-resolution CT with contrasting pulmonary vessels, MRI, cardiac catheterization. Laboratory methods for the diagnosis of pulmonary hypertension. Risk assessment for pulmonary hypertension. Complications of pulmonary hypertension. Principles of treatment of pulmonary hypertension (general, supportive, initial, specific, combination therapy, surgical treatment). Outcomes and prognosis of pulmonary hypertension.

Cor pulmonale: definition, causes and mechanisms of development of acute and chronic cor pulmonale, classification, clinical signs, laboratory and instrumental diagnostic methods, principles of drug treatment, outcomes, prognosis, prevention.

6. Inflammatory diseases of urinary system.

Etiology of uretritis, cystitis, pyelonephritis. Classification of pyelonephritis (clinical, ICD-X). The clinical picture of pyelonephritis. Diagnostc (general and special urinalysis, determination of bacteriuria, cystochromoscopy. Excretory and retrograde pyelography, radioisotope rhenography, angiography, ultrasound and radionuclide renal scan). Treatment of pyelonephritis: the regime, diet, antibiotics and uroseptics, indications for surgical treatment. Clinical supervision and prevention of pyelonephritis.

Current views on the etiology and pathogenesis of glomerulonephritis. The classification of glomerulonephritis (including morphological forms, the ICD-X). The clinical picture of glomerulonephritis (major clinical syndromes, clinical forms and variants of the course). Clinical examination of patients with glomerulonephritis. Primary and secondary prevention. Principles of treatment of glomerulonephritis: treatment, diet, etiological treatment, glucocorticoids, immunosupressants, antiplatelet agents, anticoagulants and other medications, symptomatic therapy, treatment of complications. Outcomes. Forecast.

7. Acute kidney injury. Chronic kidney disease.

Acute kidney injury- definitions, classification.

Definitions, staging of chronic kidney disease. The etiology and pathogenesis of chronic renal failure. The main clinical symptoms of chronic renal failure. Stages of the course and classification. Treatment of chronic renal failure (mode, diet, water-salt regime, the correction of acidosis, detoxification therapy, the possibility of | symptomatic treatment). Hemodialysis and peritoneal dialysis. Transplantation of kidneys.