CONFIRMED
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The plan of practical classes in clinical pathological physiology for 4th-year students of the Faculty of foreign students

1. **Clinical pathological physiology of the cardiovascular system**

Pathological physiology of coronary heart disease (CHD). The role of stenosing atherosclerosis of the coronary arteries, vasospastic factor and thrombosis in the development of coronary artery disease.
Pathological physiology of myocardial ischemia, hibernation, stunned myocardium, ischemic preconditioning. Pathophysiological characteristics of myocardial infarction and its complications. Pathophysiological substantiation of the principles of treatment of myocardial infarction: restriction of the necrotic lesion zone, coronary artery reperfusion, hemodynamic unloading of the myocardium. Pathophysiological substantiation of the principles of prevention of myocardial infarction.
Electrophysiological mechanisms of the occurrence of arrhythmias and heart blockades.
Pathophysiological mechanisms of the development of chronic heart failure (CHF), the concept of diastolic and systolic myocardial dysfunction. Pathophysiological basis of the principles of CHF prevention.
Pathophysiological mechanisms of the development of emergency conditions in cardiology (cardiogenic pulmonary edema, cardiogenic shock, life-threatening arrhythmias). Pathophysiological basis of the principles of emergency medical care.

2. **Clinical pathological physiology of respiratory disorders**

Types of ventilation dysfunction (obstructive and restrictive). Pathophysiological rationale for the use of functional diagnostic tests to identify disorders of the external respiratory system. Clinical pathophysiology of respiratory disorders in pneumonia. Pathophysiological substantiation of the principles of treatment of pneumonia. Clinical pathophysiology of chronic obstructive pulmonary disease, bronchial asthma. Pathophysiological substantiation of the principles of prevention and treatment of obstructive pulmonary diseases.

3. **Clinical pathological physiology of the digestive system**

Pathological physiology of gastroduodenal ulcers. Digestive disorders in the intestine (maldigestion and malabsorption syndromes): etiology, pathogenesis, manifestations. Pathophysiological basis for the prevention and treatment of digestive disorders. The main causes and mechanisms of liver dysfunction. Pathophysiological substantiation of the principles of diagnosis and treatment of chronic hepatitis and cirrhosis of the liver.

4. **Clinical pathological physiology of the kidneys**

Clinical pathophysiology of the main syndromes of inflammatory kidney diseases (urinary, nephritic, nephrotic).
Pathophysiological aspects of clinical manifestations of acute kidney injury: pathophysiology of water and electrolyte disorders and principles of their correction.
Pathophysiological aspects of clinical manifestations of chronic kidney disease: mechanisms of formation of secondary arterial hypertension, hormonal disorders, anemic syndrome. Mechanisms of compensation for impaired functions. The role of the glomerular filtration rate indicator in assessing the impairment of the functional state of the kidneys. Methods for calculating glomerular filtration rate. Pathophysiological substantiation of the principles of prevention and treatment of chronic kidney disease.