

CONFIRMED

Head of the Internal Diseases Department №2

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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 the blood system and hemostasis**

Erythrocytoses: types, mechanisms of their development and features of clinical manifestations.

Anemia: types of anemia, mechanisms of development of post-hemorrhagic, hemolytic, dyserythropoietic anemia, anemia due to impaired synthesis of globins. Features of clinical manifestations depending on the type of anemia and the mechanisms of their development. Adaptive reactions of the body in anemia. Pathophysiological basis of the principles of prevention and treatment of anemia.

Typical disorders in the leukocyte system: types and mechanisms of development of leukopenia, mechanisms of development and signs of leukocytosis, agranulocytosis. Typical changes in the leukocyte formula.

Pathological mechanisms of leukemia and leukemoid reactions.

Thrombocytosis and thrombocytopenia: types, mechanisms of their development and features of clinical manifestations. Pathophysiological basis of the principles of prevention and treatment of thrombocytosis and thrombocytopenia.

Pathophysiological bases of diagnosis in disorders of the hemostatic system: features of the pathogenesis and clinical manifestations of disseminated intravascular coagulation syndrome (DIC syndrome), pulmonary embolism (PE). Pathophysiological bases of prevention and treatment of DIC syndrome and PE.