

Education institution «The Gomel State medical university»
Chair of Internal Diseases №1
with courses of endocrinology and hematology
The thematic plan of practical classes on INTERNAL DISEASES for
the foreign students of the 6th course
of faculty for international students

DISEASES OF RESPIRATORY SYSTEM

1. Differential diagnosis and treatment guidelines of the syndrome of bronchial obstruction

Differential diagnosis between different types of bronchial obstruction: an asthmatic, allergic, autoimmune, infectious, inflammatory, obstructive, dyskinetic, emphysematic, hemodynamic, humoral-endocrine, neurogenic and others. Role of spirometry, blood gas studies and exhaled air, bronchoscopy. Principles of treatment of asthma and chronic obstructive pulmonary disease.

2. Differential diagnosis of the syndrome of pulmonary infiltration. Differentiated antibiotic therapy for lung diseases.

The concept of the syndrome of pulmonary infiltration. Causes of infiltration. Inflammatory and non-inflammatory infiltrates. Tumor infiltrates. Lung cancer in the therapeutic practice. Pulmonary tuberculosis in the therapeutic practice. Differential diagnosis of specific, allergic infiltrates, infiltrates in venous thromboembolism, systemic connective tissue diseases, hypostatic violations in the lungs. Fungal infections of the lungs. Concept of pulmonary eosinophilia. Differential diagnosis of lung atelectasis. Approach to the patient examination and treatment. 7 hours.

The main groups of antibiotics. Antibiotics for community-acquired pneumonia caused by atypical pathogens, nosocomial pneumonia. Antifungal antibiotics. Differentiated therapy of antibiotics, methods of use, duration of therapy, combinations of antibiotics. Side effects of antibacterial drugs. Prevention.

3. Pleural diseases. Differential diagnosis in the presence of fluid in the pleural cavity.

Clinical and radiological findings in pleural effusion. Additional research methods: ultrasonography, computed tomography. Technique and interpretation of the results of pleural puncture. Complications of pleural puncture. Differential diagnosis of pleural effusion. Doctor's tactic. Empyema of pleura. Spontaneous pneumothorax: diagnosis, emergency medical treatment. Clinical management. Treatment of diseases of the pleura.

4. Interstitial and purulent lung diseases.

Features of the clinical picture and laboratory-instrumental changes in interstitial lung diseases. Differential diagnosis in interstitial and disseminated processes of the lungs. Idiopathic pulmonary fibrosis, exogenous (toxic) alveolitis, disseminated and miliary tuberculosis, pneumoconiosis, sarcoidosis, diseases of the lungs in vasculitis and diffuse connective tissue diseases, tumor dissemination in the lungs. Acute and chronic purulent destruction of the lung, lung abscess, gangrene of the lungs. Etiopathogenesis, clinical manifestations. Diagnostic scope of research. Choosing a place for treatment patients, particularity of therapy.

DISEASES OF CARDIOVASCULAR SYSTEM

1. Chronic forms of ischemic heart disease: differential diagnostics, medical tactics

Prevalence and classification of coronary heart disease (CHD). The concept of "ischemic cascade". Silent myocardial ischemia. Distinctive features of ischemic pain. Relief of pain attack. Classification, diagnosis and treatment of stable angina. Risk stratification of cardiovascular complications. Electrocardiography and Holter monitoring in the diagnosis of chronic coronary

insufficiency. Stress tests with physical and drug load. Noninvasive diagnosis of CHD. Indications for routine and diagnostic coronary angiography.

2. Acute coronary syndrome with/without ST segment elevation. Atypical forms of myocardial infarction.

Definition, diagnosis of acute coronary syndrome. Medical tactics in prehospital and hospital step. Risk stratification according to scale GRACE. Emergency medical care, differentiated approach to treatment. Methods of reperfusion therapy. Atypical clinical forms of myocardial infarction. Classes of severity. ECG and laboratory diagnosis of myocardial infarction. Markers of myocardial necrosis. Role of echocardiography. Drug therapy depending on the method of reperfusion of the infarct-related artery. Thrombolytic and anticoagulant therapy. Indications for percutaneous coronary intervention and surgical treatment.

3. Differential diagnosis and modern principles of treatment of arterial hypertension

Prevalence, modern classification, risk stratification, variants of the course and complications of hypertension. Classification of secondary hypertension. Clinical manifestations of renal, endocrine, hemodynamic and other hypertension. ECG signs of the myocardial hypertrophy. Plan and algorithm evaluation of patients with elevated blood pressure. Differential diagnosis of primary and secondary hypertension. The purpose of treatment of hypertension. Differentiated approach to treatment. The concept of the target blood pressure values in various diseases of the internal organs. Modern antihypertensive drugs. Prevention of sudden death, heart attack and stroke in people with hypertension.

4. Differential diagnosis and differential treatment of cardiac arrhythmias and impairment of conduction

Differential diagnosis of arrhythmias. Tachyarrhythmias. Extrasystolias. Paroxysmal arrhythmias. Ventricular tachycardia. Ventricular fibrillation. Wolff- Parkinson-White syndrome. Differential diagnosis. Treatment of cardiac arrhythmias: emergency, planned treatment, medical and surgical therapy. Risk stratification of thromboembolic complications in atrial fibrillation. Classification and pharmacokinetics of antiarrhythmic drugs, side effects, interactions with other drugs and with each other. General principles for selection of antiarrhythmic drugs. Prevention of cardiac arrhythmias.

5. Differential diagnosis of pain in the chest

Possible causes of the chest pain. Pathology of myocardium, pericardium, manifested by pain in the heart. Chest pain associated with the pathology of the pleura, lung, spine. Differential diagnosis of pain in the chest.

6. Differential diagnosis and treatment of the diseases of endocardium and myocardium

Instrumental and laboratory methods for diagnosis of inflammatory lesions of the myocardium. Diagnosis of myocarditis. Endomyocardial biopsy, indications. Differential diagnosis. ECG in hormonal and metabolic disorders, inflammation of the myocardium. Risk factors, etiological factors, clinical presentation, classification, diagnostic methods. Diagnostic criteria and principles of differential diagnosis of infectious endocarditis. "Masks" infective endocarditis. Ways to verify the diagnosis. Indications for cardiosurgery interventions and drug's therapy. Basic principles of antimicrobial therapy. Prevention of infective endocarditis.

7. Differentiated approach to the treatment of chronic heart failure

Definition and classification of heart failure. Advantages and disadvantages of the classifications of chronic heart failure. The concept of the "hidden" heart failure. Basic principles of diagnosis and differential diagnosis. Modern approaches to therapy. Treatment algorithms. Chronic pulmonary heart. Heart transplantation .

DISEASES OF THE DIGESTIVE SYSTEM

1. Differential diagnosis of diseases of the esophagus. Differential diagnosis and differential treatment of gastroduodenal lesions

Gastroesophageal reflux disease (GERD), achalasia cardia, Barrett's esophagus, esophagitis, esophageal cancer. Esophageal dysphagia, etiology. Symptomatology of esophageal diseases. Differential diagnosis of impairment of swallowing. Basic methods of diagnosis and differential diagnosis. Treatment.

Functional dyspepsia, chronic gastritis, gastroduodenal ulcers, tumors. Diagnosis of complications of gastroduodenal ulcers. Principles of drug therapy of gastroduodenal lesions (eradication of *Helicobacter pylori*, the suppression of acid peptic aggression correction motor-evacuation disorders). Place physiotherapy in the treatment of ulcers. Prevention of recurrence of ulcers.

2. Differential diagnosis and treatment of chronic hepatitis and liver cirrhosis

Etiological classification of chronic hepatitis. Determination of clinical forms: autoimmune hepatitis, chronic hepatitis B, chronic hepatitis D, chronic hepatitis C, drug-induced hepatitis, Wilson's disease, liver disease caused by $\alpha 1$ - antitrypsin deficiency. Clinical symptoms. Laboratory symptoms. Medicines for the pathogenetic treatment. Drugs cause toxic liver disease. Alcoholic hepatitis. Doses of alcohol increase the risk of liver damage. Signs of alcoholic damage of other organs (chronic pancreatitis, Dupuytren's contracture, myocardiodystrophy, encephalopathy, polyneuropathy), the accompanying manifestations (nutritional deficiencies, vitamin deficiency), liver biopsy. The clinical picture. Features of laboratory diagnostics. Treatment. Nonalcoholic and alcoholic steatohepatitis. Biliary, viral, alcoholic cirrhosis, cirrhosis due to hereditary diseases. Basic clinical syndromes and symptoms. Complications. Differential diagnosis. Features of treatment of different forms of cirrhosis. Indications for liver transplantation.

3. Differential diagnosis and differential treatment of jaundice and hepatosplenomegaly

Classification of jaundice: suprahepatic (hemolytic), parenchymal, subhepatic (obstructive). Laboratory diagnosis of the syndrome of hepatocyte injury. Instrumental diagnostics of jaundice and hepatosplenomegaly. Tactics for identifying hemolytic, parenchymal or obstructive jaundice. Differential diagnosis of hepatosplenomegaly. Tactics general practitioner in identifying the disease. Indications for consultation a surgeon, a haematologist.

4. Differential diagnosis and treatment of diseases of the pancreas

Diagnosis and differential diagnosis of chronic pancreatitis. Screening program of patients. Main directions of conservative treatment: pain relief, compensation exocrine insufficiency, correction of nutritional status.

5. Diagnosis and differential diagnosis of inflammatory bowel diseases

Inflammatory bowel diseases: ulcerative colitis, Crohn's disease. Diagnostic criteria: clinical, endoscopic, histological, cytological, radiological, laboratory. Extraintestinal manifestations. Complications. Differential diagnosis. Principles of drug therapy. Indications for surgical treatment .

DISEASES OF THE JOINTS AND CONNECTIVE TISSUE

1. Current treatment options for rheumatic diseases: non-steroidal antiinflammatory agents, corticosteroids, cytostatics, genetically engineered biological agents. Differential diagnosis and treatment of rheumatoid arthritis and osteoarthritis

The features and mechanism of action of nonsteroidal antiinflammatory drugs (NSAIDs). The classification and effect of NSAIDs. NSAID interaction with other drugs. Side effects of NSAID: gastropathy, the risk of cardiovascular complications. Mechanism of action of corticosteroids, indications and contraindications to their destination. Pulse therapy: indications, contraindications,

side effects. Cytotoxic agents used in rheumatic diseases. Genetically engineered biological agents, indications for use. Extracorporeal methods of treatment in rheumatology: indications, contraindications, side effects.

Etiology, pathogenesis, pathomorphological features, extra-articular manifestations of rheumatoid arthritis. Criteria for laboratory and instrumental diagnostics. Differential diagnostics. Treatment methodology. Osteoarthritis - etiology, pathogenesis. Clinical options. Diagnostic methods. Drug and non-drug therapy.

2. Differential diagnosis and treatment of spondyloarthritis. Arthritis associated with infection: diagnosis, differentiated therapy, erythema nodosum

Clinical forms of spondyloarthritis. Features of articular syndrome, differential diagnosis. Pathogenetic therapy. Diagnostic algorithm and therapy in psoriatic arthritis. Basic forms of reactive arthritis, principles of diagnosis. Etiopathogenic, symptomatic therapy of reactive arthritis. Principles of diagnosis and pathogenic therapy of enteropathic arthropathies. Infectious arthritis (tuberculosis, viral, Lyme borreliosis), diagnosis and treatment guidelines. Erythema nodosum in a therapeutic clinic. Algorithm for differential diagnosis. Principles of treatment.

3. Differential diagnosis of microcrystalline arthritis, treatment guidelines. Differential diagnosis and treatment of osteoporosis

Gout, pyrophosphate arthropathy, hydroxylapatite arthropathy. Osteoarthritis. Mechanisms of development, clinical manifestations. Diagnostics. Differential diagnosis. Principles of treatment. The clinical picture, diagnosis, differential diagnosis of osteoporosis (osteopenia, osteomalacia). Risk factors for osteoporosis, classification. The goals of therapy for osteoporosis. Pathogenetic therapy, groups of the drugs. Prevention of osteoporosis, primary and secondary. Rehabilitation of patients with osteoporosis.

4. Differential diagnosis of systemic connective tissue diseases and systemic Vasculitis. Principles of treatment of systemic connective tissue diseases and systemic vasculitis

Diagnostic algorithm for systemic connective tissue diseases. Features of articular syndrome, the clinical picture in systemic connective tissue diseases. Differential diagnosis. Immunologic diagnostics capabilities. Outcome and prognosis in systemic lupus erythematosus, systemic sclerosis, dermatomyositis and polymyositis.

Primary and secondary forms of vasculitis. Diagnostic algorithm for systemic vasculitis. Differential diagnosis. Immunological diagnosis. Prognosis.

The goal of therapy of systemic connective tissue diseases. Differentiated approach depending on disease activity, organ failure. Purpose and stages of therapy of systemic vasculitis. The main groups of drugs used for the treatment of systemic connective tissue diseases, vasculitis: indications, contraindications, side effects, interactions with other drugs, the duration of therapy. Plasmapheresis. The concept of synchronous intensive therapy. Symptomatic therapy of systemic connective tissue diseases and vasculitis.

DISEASES OF THE KIDNEYS AND URINARY TRACT

1. Diagnostic possibilities of laboratory and instrumental methods of examination in nephrology. Differential diagnosis in patients with chronic kidney disease.

Disturbances of filtration, reabsorption and secretion. The most important renal function (urine formation and urination; regulation of homeostasis, synthesis and excretion biologically active substances; regulation of hematopoiesis). Laboratory methods for evaluation of patients with kidney disease (urinary syndrome). Instrumental methods of diagnosis of renal pathology. Methods of examination of renal function. Kidney biopsy (indications and contraindications).

Main causes and classification of chronic kidney disease (CKD). Features of urinesyndrome in glomerulonephritis. Differential diagnosis. Interstitial nephritis. Etiology. The clinical manifestations. Features interstitial nephritis due to drugs. Treatment. Prognosis.

Pyelonephritis. Risk factors for pyelonephritis. Modern methods of diagnostics of pyelonephritis. Antibacterial therapy in pyelonephritis. Criteria for selection of antibacterial drugs.

2. Differential diagnosis of nephrotic syndrome

Definition of nephrotic syndrome. Main symptoms. Diseases contributing to the development of the syndrome. Clinical manifestations. Diagnostic capabilities. Differential diagnosis. Therapeutic tactics.

3. Renal disease in diabetes mellitus, systemic connective tissue diseases, systemic vasculitis, gout, multiple myeloma. Current treatment options.

Mechanisms of renal damage in diabetes, systemic connective tissue diseases, systemic vasculitis, gout, multiple myeloma. Clinical and laboratory manifestations. Diagnostic capabilities. Principles of treatment.

DISEASES OF THE BLOOD SYSTEM

1. Differential diagnosis of the anemia syndrome, anemia treatment guidelines

Classification of anemia. Differential diagnosis. Diagnostic algorithm of anemic syndrome. Iron deficiency, vitamin B12 deficiency and folic acid deficiency, hemolytic, aplastic anemias. Anemia of chronic disease, anemia in patients with chronic kidney diseases. Principles of treatment. Criteria for the effectiveness of treatment .

2. Differential diagnosis of hemoblastosis and leukemoid reactions, treatment guidelines.

Reasons for leukemoid reactions. Blood picture. Diagnosis and differential diagnosis of leukemoid reactions and hemoblastosis. Principles of treatment of hematological malignancies

Differential diagnosis of hemorrhagic diathesis. Differential diagnosis of thrombophilia, treatment guidelines. Transfusion of blood components in therapeutic practice.

The main types of hemorrhagic diathesis. The causes of thrombocytopenia. Diagnostics and differential diagnostics. Blood components: erythrocyte mass, leukocyte concentrate, platelet concentrate, plasma. Blood preparations: preparations of complex action (albumin, protein); correctors of the hemostasis system (cryoprecipitate, prothrombin complex, fibrinogen, thrombin, fibrinolysin, hemostatic sponge for local use); means of immunological action (γ globulins, immunoglobulins - anti-tetanus, anti-influenza, anti-rhesus, anti-staphylococcal, etc.). Blood substitution solutions. Rules for storing blood components and preparations. Expiration dates. Procedure for a general practitioner when transfusing blood components. Criteria for assessing the patient's condition during and after blood transfusion. Blood transfusion reactions and complications. Prevention of complications.