TOPIC OF PRACTICAL LESSON No. 2:

Management of patients with chemoresistant tuberculosis. Treatment regimens of mono-, poly-, multi- and wide drug resistant tuberculosis. Features of management of incurable patients with tuberculosis. Application of palliative methods of treatment. Complications of pulmonary tuberculosis: hemoptysis, hemorrhage, spontaneous pneumothorax.

Actuality of theme. In recent years, the frequency of tuberculous pleurisy has increased among the contingents of sick anti-tuberculosis dispensaries is about 10-12%; the frequency and severity of complications increased significantly tuberculosis of respiratory organs. Carrying out anti-tuberculosis chemotherapy significantly extended the lives of incurable tuberculosis patients, but also increased the frequency of various complications from the chronicity of the tuberculosis process, which requires adequate therapy, and in some cases - emergency care.

Complications of respiratory tuberculosis: respiratory failure, hemoptysis, pulmonary hemorrhage, spontaneous pneumothorax, chronic pulmonary heart, atelectasis, amyloidosis of internal organs, bronchial and thoracic fistulas.

Hemoptysis and pulmonary bleeding. Pathogenesis (rupture or erosion of blood vessels, increased vascular permeability, damage to granulations, hypertension in the system pulmonary artery, disorders in the circulatory system of the blood, activation fibrinolysis). Diagnostics. Treatment: conservative (reduction of elevated pressure in the pulmonary artery system, activation of blood clot formation, inhibition of fibrinolysis, reduction of vascular wall permeability), endoscopic, surgical Complications of pulmonary bleeding (asphyxia, aspiration pneumonia, atelectasis, hypovolemia, anemia, hypoproteinemia)

Spontaneous pneumothorax. Pathogenesis, clinic, diagnosis. Closed, open, valvular pneumothorax. Medical tactics.

Chronic pulmonary heart. Pathogenesis, classification, clinic, diagnosis. Electrocardiographic criteria of chronic pulmonary heart disease. Treatment. Amyloidosis of internal organs. Forms and stages of amyloidosis. Clinic. Treatment.

Lesson plan and organizational structure.

Preparatory stage (10-20% of working time): organization of classes, staging educational goal, control of the initial level of knowledge.

The main stage (60-90% of working time): formation of professional norms and

skills Students independently and under the supervision of the teacher carry out curation patient, collect anamnesis, master the skills of an objective examination, describe and interpret radiographs, substantiate the clinical diagnosis.

The final stage (10-20% of working time): level control and correction professional abilities and skills, summarizing, homework.

General approaches to the diagnosis of tuberculosis. Special methods detection and diagnosis of tuberculosis (microbiological diagnosis, x-ray diagnostics, tuberculin diagnostics).

Actuality of theme. In recent years, tuberculosis in Ukraine has become a threatening medical-social and national-economic problem, which constitutes a national danger. Doctors of various profiles need knowledge to recognize this disease to prevent its spread tuberculosis and the unification of approaches to providing phthisiopulmonology help to the sick

The purpose of the lesson: to teach students the method of clinical examination of patients on pulmonary tuberculosis and the correct interpretation of the obtained data; elements of deontology when communicating with patients; develop skills recognition of clinical and radiological forms of pulmonary tuberculosis in compliance with modern classification. Familiarize students with x-ray, laboratory methods of diagnosis of tuberculosis lungs, to teach students tuberculin diagnostics, staging technique tuberculin tests, evaluation of their results, help to master skills of functional research of the external respiratory system.

The student should know:

- local and general symptoms of pulmonary tuberculosis;

- X-ray image of chest organs in different projections innorms;

- concepts of "focus", "infiltrate", "cavity", "fibrosis", etc radiological signs,

- clinical forms of pulmonary tuberculosis in X-ray imaging;

- methods of bacteriological research;

- types of tuberculin and their features;

- indications and contraindications for Mantoux tuberculin tests and Koch;

- criteria of negative, positive and hypersensitive tuberculin reaction;

- tuberculin curve, definition, characteristics;

- post-vaccination and post-infection reaction to tuberculin;

- indicators of peripheral blood in the norm and in inflammatory processes;

- spirography, its indicators and assessment.

The student should be able to:

- collect the patient's complaints, anamnesis of illness and life;

- identify persons with an increased risk of tuberculosis;

- examine the patient and identify the main symptoms of the disease;

- palpation, percussion and auscultation of chest organs,

interpret the obtained results;

- identify and explain pathological changes on radiographs;

- to study a patient's sputum smear under a microscope;

- evaluate the results of sputum culture;

- conduct and evaluate the Mantoux tuberculin test based on it results to identify persons who need additional examination on tuberculosis;

- to evaluate the indicators of the general analysis of peripheral blood in different cases forms and phases of the tuberculosis process;

- evaluate the results of spirography;

- justify the clinical diagnosis according to the classification.

Interdisciplinary integration.

Content of the topic of the lesson:

Methods of clinical examination of the patient.

Questioning. The variety of manifestations of pulmonary tuberculosis in depending on the stage and spread of the process. Clinical symptoms of the disease:

a)associated with intoxication syndrome (elevated body temperature, weakness, reduced performance, sweating, loss of appetite, loss body weight, sleep disturbances, irritability);

b) local manifestations of the disease, associated with lung damage (cough, expectoration, hemoptysis, chest pain, shortness of breath).

Anamnesis. The onset of the disease. Past illnesses ("influenza", recurrent pneumonia, accompanying diseases). Value contact with individuals who allocate MBT. Working and living conditions of the patient.

Abuse of smoking, alcohol, drug addiction. Results and date

preliminary fluorographic examination (in adults), information about

BCG vaccination and results of tuberculin diagnostics (in children).

Objective examination data. Review. General condition. Provisions in

the bed Body temperature. Consciousness, skin, visible mucous membranes.

Subcutaneous adipose tissue. Swelling Peripheral lymph nodes.

Head, neck, thyroid condition. Chest: shape,
symmetry, uniformity of participation in the act of breathing. Palpation data
(painfulness, voice tremor). Topographic and comparative data
chest percussion. Auscultation: strength and nature of breathing, wheezing,
crepitation, their localization, bronchophonia. Cardiovascular system.
Apex thrust. Epigastric pulsation. The limits of the heart. Data
auscultation JSC Pulse.
Diseases of other organs, which are accompanied by the corresponding ones
clinical symptoms.
X-ray examination. Methods of X-ray examination
patients with respiratory tuberculosis. X-ray -, tomo -, fluorography,
radioscopy. X-ray image of normal chest organs
cells in different projections. X-ray image of partial and
segmental structure of the lungs. Clinical forms of pulmonary tuberculosis in
X-ray image. Analysis of radiographs, tomograms, fluorogram
Computed tomography, bronchography, indications for their use,
diagnostic value.
Tuberculin diagnostics.. Mantoux tuberculin test with 2 TO PPD - L.
Staging technique. Application of the Mantoux test for determination
primary infection, early detection of tuberculosis. Selection of persons,
that are subject to revaccination. Using the Mantoux test for detection
persons with an increased risk of tuberculosis and those who
need examination and supervision of a phthisiologist. Infectious and post-vaccinal sensitivity to tuberculin, differential diagnosis.
Use of tuberculin samples for differential diagnosis
tuberculosis with other diseases. Koch's test.
Microbiological research. Methods of detection of mycobacteria
tuberculosis in sputum and other pathological materials, their significance
results to confirm tuberculosis and differential diagnosis.
Indications for microbiological examination of sputum and urine in persons with

the risk of tuberculosis.

Variability of mycobacteria and their significance for the clinic and treatment tactics.

Determination of sensitivity of MBT to antituberculosis drugs.

Tracheobronchoscopy. Bronchoscope research methods. Indications for

bronchoscopy for tuberculosis and other respiratory diseases.

Histological and cytological examination of biopsies. Medicinal

bronchoscopy.

Blood and urine tests. Diagnostic value of element changes

peripheral blood and ESR in different forms and phases of tuberculosis

process

Study of urine analysis of patients with tuberculosis of the lungs, urinary tract and reproductive system, as well as patients with tuberculosis, complicated by amyloid nemnephrosis

Lesson plan and organizational structure:

Preparatory stage (10-20% of working time): organization of classes, setting educational goals, control of the initial level of knowledge.

The main stage (60-90% of working time): formation of professional skills

and skills. Students independently and under the supervision of the teacher carry out curation of the patient, collecting anamnesis, mastering objective skills

examination, describe and interpret radiographs, substantiate clinical diagnosis.

The final stage (10-20% of working time): level control and correction

professional abilities and skills, summarizing, homework.

Materials for methodological support of the lesson.

Test control.

1. What data are not taken into account when conducting differential diagnosis

between infectious and post-vaccination reactions to tuberculin?

A. Contact with tuberculosis patients.

B. The intensity of the reaction to the Mantoux test in previous years.

C. The presence of a post-vaccination scar.

D. Time of BCG vaccination.

E. Presence of pneumonia in the anamnesis.

2. In a two-year-old child, the reaction to the Mantoux test with 2 TO PPD-L - infiltrate with a diameter of 7 mm, at three years - 3 mm. Post-vaccination scar 4 mm in size. What is the nature of the reaction to tuberculin observed in child?

A. Infectious allergy.

B. "Virage" of the tuberculin reaction.

S. The child is sick with tuberculosis.

D. Post-vaccine allergy.

E. Mantoux reaction is positive.

3. A 35-year-old patient is being treated in an anti-tuberculosis unit dispensary for infiltrative tuberculosis of the left upper lobe lungs (lobites) in the phase of decay. No changes during physical examination discovered How the patient should breathe correctly to increase informativeness of the auscultation method?

A. Breathe often.

B. Breathe deeply.

C. To cough hard.

D. Cough lightly and take a deep breath.

E. Breathe with an open mouth.

4. In a patient with tuberculosis, the lungs are heard under the left shoulder blade mid-vesicular rales. What do these changes indicate?

A. Focal changes in lung tissue.

V. Bronchitis.

S. The presence of decay cavities.

D. Spontaneous pneumothorax.

E. Atelectasis

5. In a 20-year-old patient, during a fluorographic examination, an area of darkening was found in the apical-posterior segment of the left lung

of low intensity with indistinct contours up to 1 cm in diameter. To which

X-ray syndrome belongs to the detected formation?

A. Clearing syndrome.

B. Round shadow syndrome.

S. Focal shadow syndrome.

D. Syndrome of the changed pulmonary pattern.

E. Dissemination syndrome.

6. A 43-year-old patient. He is undergoing a course of antimycobacterial therapy

due to CTB (12.12.1998) of the upper lobe of the left lung (fibrous cavernous, infiltration and insemination phase), Destr+, MBT+M+K+ResistO,

HISTO, Kat4 Kog4 (2004). What research is needed first

conduct to the patient to prescribe the optimal combination

chemotherapy drugs?

A. Determine the type of MBT.

B. Determine the presence of secondary flora.

S. To determine the sensitivity of MBT to antimycobacterial drugs.

D. To determine the massiveness of bacterial excretion.

E. To determine the virulence of MBT.

7. A 32-year-old patient was diagnosed with pulmonary tuberculosis (February 15, 2007)

(disseminated, infiltration and decay phase), Destr+ MBT+M+K+ResistO,

HISTO, Kat1 Kog1 (2007). What method allows you to determine sensitivity

mycobacteria to antituberculosis drugs?

A. Bacterioscopic.

B. Bacteriological.

S. PCR.

D. ELISA.

E. Biological.

8. What is the vital capacity of the lungs in healthy people?

A. 1000 - 3000 ml.

B. 1500 - 3500 ml.

S. 3500 - 5000 ml.

D. 6000 - 8000 ml.

E. 500 - 800 ml.

9. The child is 3 years old. Vaccinated in the maternity hospital. There is on the left shoulder

post-vaccination scar with a diameter of 7 mm. At the age of 1, Mantoux test with 2 TO

PPD-L was 10 mm, at 2 years - 8 mm, at 3 years - 14 mm. What about

what is most likely evidenced by such dynamics of the tuberculin test?

A. A child's disease of the secondary form of pulmonary tuberculosis.

B. Presence of post-vaccination immunity.

C. Presence of infectious immunity.

D. The presence of a hyperergic reaction to tuberculin.

E. Formation of negative energy.

10. The patient is 45 years old. He is being treated in anti-tuberculosis

dispensary regarding the recurrence of S2 tuberculosis of the left lung

(infiltrative tuberculosis). MBT is found in the sputum of the patient, although

Destructive changes are not detected on the X-ray examination. Which

the x-ray method of research should be performed on the patient for detection

sources of bacterial excretion?

A. Tomography.

V. Bronchography.

C. Aiming radiography.

D. Roentgenoscopy.

E. Lateral X-ray.