

## **TOPIC OF THE PRACTICAL LESSON № 7:**

**Focal and infiltrative tuberculosis. Caseous pneumonia. Tuberculoma. Fibro-cavernous tuberculosis. Cirrhotic tuberculosis. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences.**

Actuality of theme. In 1995, an epidemic of tuberculosis was registered in Ukraine. Timely detection of focal, infiltrative tuberculosis has a positive effect on treatment results, significantly improves the epidemiological situation; late diagnosis, on the contrary, promotes development of destructive and common forms of tuberculosis. Chronic forms of tuberculosis (fibrous - cavernous, cirrhotic) is serious clinical, epidemiological, social problem, because formed gradually over the years and lead to disability most patients.

The purpose of the lesson: to teach students on the basis of anamnesis, clinical, radiological and other auxiliary methods of examination to diagnose secondary forms of tuberculosis and prescribe appropriate treatment.

### The student must know:

- pathogenesis of focal, infiltrative tuberculosis, caseous pneumonia, fibro-cavernous and cirrhotic pulmonary tuberculosis;
- clinical picture, course, diagnostic methods, differential diagnosis of focal, infiltrative tuberculosis, caseous pneumonia, tuberculoma, fibro-cavernous, cirrhotic pulmonary tuberculosis;
- principles of treatment of focal, infiltrative tuberculosis, caseous pneumonia, tuberculoma, fibro-cavernous, cirrhotic pulmonary tuberculosis.

### The student must be able to:

- collect a history of the disease;
- examine the patient and identify the main symptoms of the disease;
- to detect and interpret pathological changes on chest radiographs, draw up a protocol of X-ray examination;
- evaluate the results of tuberculin tests and other laboratory tests;
- substantiate the clinical diagnosis according to the classification;
- to conduct a differential diagnosis of disease;
- prescribe treatment to patient.

Interdisciplinary integration.

Subject	Know	Be able
<b>Previous:</b>		
Anatomy	Respiratory anatomy.	
Physiology	Respiratory physiology.	
Microbiology	Morphological structure, properties, pathogenicity and virulence of MBT, their methods detection in sputum and others pathological materials.	Collect material for bacteriological research. Evaluate the results obtained.
Pathological anatomy	Pathomorphological changes in organs breathing in tuberculosis.	
Pathological physiology	Pathophysiology of diseases respiratory system.	
Pharmacology	Classification and mechanisms of action anti-TB drugs.	
Propaedeutics internal diseases	Methodology of the objective examination of the patient.	Make objective examination of the patient, evaluate the results obtained.
Radiology	Radiological signs and syndromes.	Interpret data radiological examination.
<b>The following:</b>		
Internal medicine	Clinical manifestations and radiological picture pneumonia, eosinophilic infiltrate, pulmonary infarction, lung abscess.	Differentiate from focal, infiltrative tuberculosis, caseous pneumonia, tuberculoma, fibrous - cavernous, cirrhotic tuberculosis.
Oncology	Clinical manifestations and radiological picture central and peripheral lung cancer.	Differentiate from focal, infiltrative tuberculosis, caseous pneumonia, tuberculoma, fibrous-cavernous, cirrhotic tuberculosis.
Intra-subject integration:	Clinical manifestations and radiological picture other clinical forms tuberculosis.	Differentiate from focal, infiltrative tuberculosis, caseous pneumonia, tuberculoma, fibrous-cavernous, cirrhotic tuberculosis.

## Content of the lesson topic:

*Focal pulmonary tuberculosis.* Pathogenesis and pathomorphology. Softfocal and fibro-focal forms. Determination of activity tuberculosis process. Clinic, course, diagnosis, treatment.

*Infiltrative pulmonary tuberculosis.* Pathogenesis and pathomorphology. Clinic, course, diagnostic methods. Clinical and radiological variants infiltrates, lobular, rounded, cloudy, lobite, periscisuritis. Differential diagnosis, treatment, consequences.

*Caseous pneumonia.* Factors contributing to its development. Features course of caseous pneumonia. Differential diagnosis with nonspecific pneumonia.

*Tuberculoma.* Pathogenesis and pathological anatomy. Morphological varieties: homogeneous, infiltrative-pneumonic, layered, conglomerate, “pseudotuberculoma”. Clinic, diagnostic methods. Course: stationary, progressive tuberculomas. Differential diagnosis with echinococcal cyst, peripheral cancer, benign tumors, metastases. Methods of conservative and surgical treatment, consequences.

*Fibrous - cavernous pulmonary tuberculosis.* Pathogenesis of caverns. Building caverns. Radiological signs of the cavity. Ways to heal the cavity. The reasons for the formation of fibro-cavernous pulmonary tuberculosis. Pathogenesis, pathomorphology, clinical course variants, radiological signs. Differential diagnosis with cysts, abscesses, cavities form of cancer. Complications of fibro-cavernous tuberculosis (non-specific and specific), their prevention, diagnosis and treatment. Treatment of fibro-cavernous tuberculosis. Value drug resistance of MBT, intolerance to anti-TB drugs in long-term chemotherapy. Indications for surgery treatment. Consequences.

*Cirrhotic pulmonary tuberculosis.* Clinical signs, course, treatment. Definition of the terms “pneumosclerosis”, “fibrosis”, “cirrhosis”. Pneumogenic, bronchogenic, pleurogenic cirrhotic tuberculosis. Differential diagnosis with inactive post-tuberculous cirrhosis, post-pneumonic cirrhosis.

### Plan and organizational structure of the lesson:

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

*The main stage* (60-90% of working time): the formation of professional skills and skills. Students independently and under the supervision of the teacher carry out supervision of the patient, collect the anamnesis, master the skills of the objective review, describe and interpret radiographs, substantiate clinical diagnosis.

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

Materials of methodical providing of employment.

Test control.

1. A 48-year old patient went to the doctor with complaints of weakness, increased fatigue, decreased efficiency. When objective examination of the patient's pathology was not detected. Fluorogram: fibrous on the background altered pulmonary pattern in the apical (S1) segment of the right lung there are low-intensity shadows up to 1 cm with blurred contours. On the basis of which sign the detected fluorographic changes are attributed to focal pulmonary tuberculosis?

- A. Shadows of low intensity.
- B. Shadows have blurred contours.
- C. Shadows are up to 1 cm in size.
- D. Shadows are placed on the background of fibrous altered pulmonary pattern.
- E. Localization of shadows in the upper segment of the right lung.

2. How is focal tuberculosis most often detected?

- A. At clinical inspection.
- B. During the preventive fluorographic examination.
- C. At bacterioscopic inspection.
- D. At bronchological inspection.
- E. At immunological inspection.

3. What cannot be a consequence of infiltrative tuberculosis?

- A. Complete resorption.
- B. Formation of tuberculoma.
- C. Formation of a group of compacted foci.
- D. Fibrous-cavernous tuberculosis.
- E. Tuberculosis of intrathoracic lymph nodes.

4. What criteria are crucial when conducting a differential diagnosis between caseous pneumonia and infiltrative tuberculosis?

- A. Rapid, progressive course of the disease.
- B. The process of localization.
- C. The presence of a decay cavity in the pulmonary part.
- D. The degree of bacterial excretion.
- E. The presence of complications.

5. What radiological syndrome accompanies the presence pulmonary tuberculoma?

- A. Focal shadow syndrome.
- B. Syndrome of "spherical" formation.
- C. Restricted blackout syndrome.

- D. Syndrome of annular enlightenment.
- E. Syndrome of lung root pathology.

6. From what clinical form of tuberculosis is most often formed tuberculoma?

- A. Disseminated.
- B. Infiltrative.
- S. Fibrous-cavernous.
- D. Cirrhotic.
- E. Bronchoadenitis.

7. What is the most characteristic course for fibro-cavernous tuberculosis?

- A. Wavy, with periods of remission and exacerbations.
- B. Acutely progressive.
- S. Subacute.
- D. Asymptomatic.
- E. Rapid reversal.

8. What is most often a specific complication of fibro-cavernous pulmonary tuberculosis?

- A. Tuberculous pleurisy.
- B. Tuberculosis of the larynx.
- C. Tuberculosis of the intestine.
- D. Tuberculosis of the kidneys.
- E. Tuberculosis of the genitals.

9. What is the main criterion to distinguish cirrhotic tuberculosis from cirrhosis?

- A. The presence of intoxication syndrome.
- B. The presence of bronchopulmonary syndrome.
- C. The presence of dry scattered rales.
- D. The presence of a positive tuberculin reaction.
- E. The presence of bacterial excretion.

10. In which case cirrhotic tuberculosis has a “pleurogenic” genesis?

- A. At a long course of fibrous-cavernous tuberculosis.
- B. In the long course of disseminated tuberculosis.
- C. Based on atelectasis of lung tissue.
- D. In patients with common infiltrative pulmonary tuberculosis, who suffered from pneumopleurisy.
- E. In patients with massive pleurisy of nonspecific etiology.

Approximate map for the organization of independent work of students with educational literature:

Educational tasks	Instructions for the task	Answer
<b>Examine:</b> Focal tuberculosis	Pathogenesis. Softfocal and fibrous-focal forms. Clinic, diagnostic methods, differential diagnosis, treatment.	
Infiltrative tuberculosis	Pathogenesis. Clinical and radiological forms. Clinic, diagnostic methods, differential diagnosis, treatment.	
Caseous pneumonia	Definition, pathogenesis, clinic, diagnosis, treatment, consequences.	
Tuberculoma	Morphological varieties, clinic, course, diagnosis, differential diagnosis, treatment.	
Pathogenesis of destructive forms of pulmonary tuberculosis	The concept of the cavern. Stages formation of destructive process. Cavern signs. Cavern involution.	
Fibrous-cavernous tuberculosis	Clinic, course, diagnosis, differential diagnosis, complications. Treatment.	
Cirrhotic tuberculosis	Clinic, course, diagnosis, differential diagnosis. Treatment.	

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