

### TOPIC OF THE PRACTICAL LESSON № 3:

**Primary tuberculosis. Tuberculosis of unknown location. Tuberculosis of the intrathoracic lymphatic nodes. Primary tuberculous complex. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Complications of primary tuberculosis.**

Actuality of theme. It has been observed in Ukraine in recent years steady increase in the incidence of tuberculosis in children. Children, adolescents, mostly suffer from primary forms of tuberculosis, which about untimely detection and inadequate treatment may have complicated course, and in some cases fatal.

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

The student must know:

- pathogenesis of primary tuberculosis;
- clinical picture, course, diagnostic methods, differential diagnosis of tuberculosis of unknown location, primary tuberculosis complex, tuberculosis of intrathoracic lymph nodes;
- complications of local forms of primary tuberculosis, their clinical signs and diagnosis;
- principles of treatment of primary tuberculosis.

The student must be able to:

- describe the main radiological syndromes in primary forms tuberculosis;
- to diagnose primary forms of tuberculosis on the basis of anamnestic, clinical radiological, laboratory data;
- to formulate a clinical diagnosis of primary forms according to the classification;
- to appoint complex therapy at various forms of primary tuberculosis;
- to diagnose complications of primary forms of tuberculosis.

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	Collect material for bacteriological research. Evaluate the results obtained.

	pathological materials.	
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.	Detect radiological changes in the lungs.
<b>The following:</b>		
Pediatrics	Clinical manifestations and radiological picture pneumonia, lymphogranulomatosis in children.	Differentiate from Primary tuberculosis.
Internal medicine	Clinical manifestations and radiological picture of pneumonia, lymphogranulomatosis, sarcoidosis.	Differentiate from Primary tuberculosis.
Intra-subject integration	Clinical manifestations, radiological picture of other clinical forms tuberculosis.	Differentiate from Primary tuberculosis.

Content of the lesson topic:

- Pathogenesis of primary tuberculosis in children and adolescents. Value massiveness of infection, virulence and type of mycobacteria to occur primary tuberculosis. Factors that reduce the body's resistance to tuberculosis infection. Primary infection. The value of tuberculin test for the diagnosis of infection. Bending of tuberculin reactions.
- Morphological basis of tuberculosis of unknown location. Clinical manifestations, course. Differential diagnosis of tuberculosis is not established localization with helminthiasis, rheumatism, chronic tonsillitis. Treatment.
- Classification of intrathoracic lymph nodes. Clinical radiological forms of tuberculous bronchadenitis: infiltrative, tumorous, "small". Pathogenesis, pathomorphology, clinic, course. Differential diagnosis with nonspecific adenopathies, lymphogranulomatosis, sarcoidosis. Treatment. Consequences.
- Pathogenesis and pathomorphology of the primary tuberculosis complex. Clinical manifestations, course, diagnosis. Differential diagnosis with nonspecific pneumonia. Treatment. Consequences. Residual changes primary tuberculosis complex and their significance for the occurrence secondary forms of tuberculosis.

- Complications of tuberculosis of intrathoracic lymph nodes and primary tuberculosis complex (atelectasis, specific lesion bronchial, hematogenous or lymphohematogenous dissemination, pleurisy, primary cavity formation), diagnosis and treatment.

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. The girl is 6 years old. Complaints of general weakness, sweating, subfebrile body temperature, loss of appetite. Mantoux test - papule 17 mm. Objectively: pallor, micropolyadenitis. Vesicular respiration in the lungs. Heart tones are pure, rhythmic. Radiologically: the roots are normal, pulmonary the fields are transparent. The sinuses are free. Clinical diagnosis?

- A. Tuberculosis of unknown location.
- B. Primary tuberculosis complex.
- C. Tuberculosis of intrathoracic lymph nodes.
- D. Tuberculous pleurisy.
- E. Disseminated tuberculosis.

2. The schoolboy is 13 years old, fell ill a month ago. There was a dry cough, increased fatigue, decreased appetite, decreased school performance. It's worth it registered for the turn of the tuberculin test for 8 months. Objectively - the skin is pale, peripheral lymph nodes are enlarged beans; painless, soft. Mantoux test with 2 TU - papule 17 mm. Blood test: lake. -  $10.0 \times 10^9/l$ , ESR - 30 mm / hour. On the radiograph of the lungs – right root 3 cm wide, the outer contour is blurred. Which diagnosis is the most probable?

- A. Tuberculosis of unknown location.
- B. Primary tuberculosis complex.
- C. Tuberculosis of intrathoracic lymph nodes.
- D. Lymphogranulomatosis.
- E. Sarcoidosis of intrathoracic lymph nodes.

3. The girl is 19 years old. At preventive fluorographic examination revealed a bilateral symmetrical increase in intrathoracic lymph nodes. No complaints. Auscultatory -

vesicular respiration. Mantoux test with 2 TU - negative. Hemogram without changes.

Which is clinical diagnosis?

- A. Sarcoidosis of intrathoracic lymph nodes.
- B. Tuberculosis of intrathoracic lymph nodes.
- C. Lymphogranulomatosis.
- D. Lymphosarcoma.
- E. Lymphocytic leukemia.

4. The child of 4 years was in contact with the patient on active tuberculosis. A positive Mantoux test with 2 TU - papule 7 mm was detected for the first time. Three months later, a pneumonia clinic appeared. Auscultatory – wheezing are not listened to. Radiologically - the case in the third segment an infiltrative shadow associated with a path with an extended right root. What disease can you think of?

- A. Cyst of the right lung.
- B. Right-sided pneumonia.
- C. Atelectasis of the third segment of the right lung.
- D. Right-sided exudative pleurisy.
- E. Primary tuberculosis complex on the right.

5. A 10-year-old girl. Treated for tumor-like form tuberculosis of intrathoracic lymph nodes. On the radiograph of the organs chest in addition to the enlarged root due to enlarged lymph nodes is determined by a homogeneous darkening in the upper right lobe lung, which on the lateral radiograph has the shape of a triangle, with a vertex, facing the root. What process complicated the course of tuberculosis?

- A. Right-sided pneumothorax.
- B. Interstitial pleurisy.
- C. Right upper lobe pneumonia.
- D. Atelectasis of the upper lobe of the right lung.
- E. Myocardial infarction of the right lung.

6. What treatment tactics do you need to diagnose “tuberculosis unidentified localization”?

- A. Dynamic observation.
- B. Further examination.
- C. Treatment as a clinical form of tuberculosis.
- D. Chemoprophylaxis.
- E. Vaccine prophylaxis.

7. What are the characteristic pathomorphological forms of tuberculosis lesions intrathoracic lymph nodes?

- A. Neutrophilic, lymphocytic.
- B. Hyperplastic, caseous.
- C. Exudative, alternative.
- D. Coagulation, colic.
- E. Hemorrhagic, purulent.

8. During the medical commission of a young man of 18 years on the fluorogram revealed petrification in the lower lobe of the left lung and calcified lymph nodes at the root of the lung. At objective inspection, research of blood changes do not detected. What is the focus of the lungs?

- A. The hearth of Simons.
- B. Primary affect.
- S. The hearth of Gona.
- D. Apricot hearth.
- E. Tuberculoma.

9. In which course of the primary tuberculosis complex is detected radiological symptom of bipolarity?

- A. In the initial stages.
- B. In the midst of the disease.
- C. At the beginning of reverse development.
- D. At the beginning of calcification.
- E. A few years after recovery.

10. What is the method of X-ray examination in the diagnosis of “small” forms of tuberculosis of intrathoracic lymph nodes are the most informative?

- A. Aiming radiograph.
- B. Fluorogram.
- C. Tomogram at the level of tracheal bifurcation.
- D. Review chest radiograph.
- E. Bronchogram.

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

Educational tasks	Instructions for the task	Answer
<b>Examine:</b> Pathogenesis primary tuberculosis	Primary infection. The concept of paraspecific changes to specific tuberculous granuloma. Tuberculin reaction. Early period of primary tuberculosis infections.	
Tuberculosis unidentified localization	Definitions, clinical manifestations, course, diagnostic methods, differential diagnosis	
Tuberculosis intrathoracic lymph nodes	Infiltrative, tumor-like and “small” options: clinic, course, diagnostics, differential diagnostics.	
Primary tuberculosis complex	Clinic, course, diagnosis, radiological phases, differential diagnosis.	
Complications of the primary tuberculosis	Hematogenous and lymphogenic dissemination, pleurisy, atelectasis, bronchial lesions, education primary cavity.	

Treatment	Etiotropic chemotherapy, pathogenetic and symptomatic treatment. Residual changes after transferred primary tuberculosis.	
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