THEMATIC PLAN OF PRACTICAL CLASSES
for " Phthysiopulmonology" cycle
for the 4th year students of the Faculty of international students
7, 8 semester

№	Наименование темы	Часы
1	**Introduction. Ethical and deontological aspects in TB hospital. Bacteriological diagnostics of tuberculosis (TB).**	**6**
1.1	General rules in anti-TB hospital. Core requirements and problems of medical ethics and medical deontology.	
1.2	Bacteriological laboratory tests for MTB detection. Clinical specimens. Collection of samples.	
1.3	Sputum smear AFB microscopy. Ziehl-Neelsen staining. Fluorescent auramine staining.	
1.4	Culture methods of MTB detection. Classical cultivation on Löwenstein-Jensen solid media. Automated culture method (BACTEC MGIT). MTB identification and drug resistance testing.	
1.5	Genotypic methods of MTB detection and identification and drug resistance testing.	
2	**Diagnostics of TB.**	**6**
2.1	Peculiarities of TB patients examination. TB diagnostics.	
2.2	Symptoms and signs of TB. History of TB disease. Physical examination of patient.	
2.3	Radiographic diagnostics (chest radiography, computer tomography, magnetic resonance imaging). X-ray patterns of pulmonary tuberculosis.	
2.4	Tuberculin skin test. TB-antigen skin test. IFN-γ Release Assays (IGRAs).	
2.5	Additional diagnostics. Fiberoptic bronchoscopy. Broncho-alveolar lavage procedure. Lung biopsy. Pleural puncture. Surgical diagnostics for TB (thoracoscopy, mediastinoscopy). Spirography.	
3	**Classification of TB. Primary TB in children. Miliary TB.**	**6**
3.1	Clinical forms of TB. Signs and diaaagnostic criteria of TB disease. Primary and post-primary (secondary) tuberculosis. ICD-10 classification.	
3.2	Primary tuberculosis in children. Risk factors for TB infection and disease. Pathogenesis and hystomorphology.	
3.3	Progressive primary TB in children. Clinical forms of primary TB: general and extra pulmonary symptoms. Primary TB complex (tuberculous mediastinal lymphadenitis and endobronchial TB).	
3.4	Miliary TB disease. Definition, pathogenesis and hystomorphology, clinical variants, diagnostics, outcomes.	
3.5	Disseminated TB. Definition, pathogenesis and hystomorphology, clinical variants, diagnostics, outcomes.	
4	**Secondary pulmonary TB.**	**6**
4.1	Subacute TB forms. Pathogenesis, hystopathology and clinical aspects depending on host's immune response and reactivity.	
4.2	Radiographic appearance of typical (subacute) pulmonary TB. Laboratory verification of pulmonary TB. Course and prognosis.	
4.3	Acute progressive pulmonary TB (caseous pneumonia). Risk factors, pathogenesis, hystopathology and clinical signs of caseous pneumonia. Clinical course and prognosis for acute progressive pulmonary TB.	
4.4	Tuberculoma – pathogenesis, hystopathology and clinical aspects. Radiographic features and verification of tuberculoma. Course and prognosis. Indication for surgical treatment.	
5	**Chronic pulmonary TB disease. Complications of tuberculosis.**	**6**
5.1	Stages of cavitation in TB. Elastic and rigid caverns. Clinical and X-ray manifestation.	
5.2	Predisposing causes and pathogenesis chronic pulmonary TB. Symptoms and course of chronic pulmonary TB disease. X-ray signs.	
5.3	Clinical and lab criteria of healing and reactivation of TB lesion. Post-TB sequels.	
5.4	Systemic complications of TB: lung-heart insufficiency, amyloidosis.	
5.5	Haemophtysis and lung haemorrhage. Diagnostic approach and management.	
5.6	Spontaneous pneumothorax. Closed and tension pneumothorax. Signs and symptoms, diagnostics and management. Urgent needle decompression of the pleural space.	

6	**Extrapulmonary TB.**	**6**
6.1	Tuberculous meningoencephalitis – risk factors and clinical signs. Lumbar puncture and the cerebrospinal fluid examination. Cerebral tuberculoma - clinical aspects, course and prognosis.	
6.2	Pleural TB - pathogenesis and clinical aspects. Physical signs and radiographic features. Thoracentesis and examination of the pleural fluid.	
6.3	TB of the upper airways. Indications for bronchoscopy.	
6.4	TB of peripheral lymph node. Genitourinary and genital TB. Skeletal tuberculosis. Less common extrapulmonary forms (gastrointestinal tuberculosis, tuberculous pericarditis and other).	
7	**TB associated with concomitant diseases and conditions.**	**6**
7.1	Pulmonary TB associated with occupational pneumoconiosis.	
7.2	HIV-associated TB.	
7.3	TB associated with diabetes mellitus, chronic non-specific respiratory diseases, lung cancer, gastro-intestinal, renal disorders, mental diseases, alcohol and narcotic addiction.	
7.4	Tuberculosis and maternity.	
8	**Treatment of TB. Drug resistant TB.**	**6**
8.1	Principles and aims of anti-TB treatment. First-line and second-line anti-TB drugs. Modes of action and dosages of anti-TB drugs. TB treatment regimens. Initial (intensive) phase and a continuation phase of treatment.	
8.2	Side effects of anti-TB drugs. Symptom-based approach to management of drug side-effects.	
8.3	Adjunctive therapy of TB. Surgical treatment of TB – indications and contraindications. Adequate diet for TB patients.	
8.4	Preventing of drug resistance of MTB. Primary and secondary (acquired) resistance. Causes and mechanisms of drug resistance developing. Clinical course and prognosis of DR-TB. Principles of DR-TB treatment. Palliative and end-of-life care for incurable TB patients. Sanatoria for TB patients.	
9	**Prevention in the community. Biosafety and hospital control.**	**6**
9.1	Social risk factors of active TB disease developing. Improving access to care for high-risk groups.	
9.2	Bacille de Calmette et Guérin vaccine. Organization of BCG-vaccination in high and low TB prevalence countries. Individual contraindications and complications of the BCG vaccination. Treatment of latent tuberculous infection (preventive chemotherapy).	
9.3	Sanitary prophylaxis. Respiratory isolation of persons with active TB disease as a measure to limit MTB transmission. Screening and management of active TB contacts. Tuberculosis in cattle - boving TB control.	
9.4	Biosafety in the hospital and in the laboratory. Tuberculosis infection control activities aims and levels. The high TB transmission risk zones. TB transmission control measures (administrative, engineering, and individual protection). The rules of individual protection masks using.	
9.5	Anti-TB control measures in outpatient health care settings.	
10	**Principles of Tuberculosis Control.**	**6**
10.1	Tuberculosis as a global problem. WHO promoted TB control measures – DOTS, Stop TB and The End TB strategies. National Tuberculosis Program. Basic, intermediate and national level of management.	
10.2	TB case-finding. TB screening and TB suspects. Screening for AFB smear-positivity.	
10.3	The role of radiography and immunological tests for the case-finding.	
10.4	TD register. Categories of TB patients for registration on diagnosis. Monitoring patients during treatment - sputum conversion, clinical and chest X-ray monitoring. Treatment outcome recording and “cohort analysis” of treatment results.	
10.5	Epidemiological indices (TB morbidity and mortality rate, disease incidence and prevalence, drug resistant TB and HIV-TB surveillance).	

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