MORPHOLOGICAL DIAGNOSIS OF TUBERCULOUS LUNG LESIONS BASED ON BIOPSY MATERIAL IN PATIENTS WITHOUT TYPICAL CLINICAL SIGNS OF THE DISEASE

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Abstract

The aim of the study is to elucidate the role of morphological methods in diagnosing biopsy material from patients with pulmonary tuberculosis without a typical clinical picture of the disease.

Materials and methods. A retrospective cohort study of 83 clinical cases of pulmonary tuberculosis (TB) with bronchial or lung biopsy was conducted for the period of 2019–2023. The analysis included general clinical data, chest radiology findings, the clinical spectrum of provisional diagnoses, and morphological and bacteriological results.

Results. At the time of a hospitalization, the clinical picture was characterized by the predominance of bronchopulmonary and intoxication syndromes with the prevalence of complaints of cough (71,0 %) and shortness of breath (38,6 %). Other symptoms (low-grade fever, chest pain, weight loss, etc.) were observed less frequently, in 20,5–34,9 % of cases. Among the first established clinical diagnoses, differential diagnosis (between pneumonia, tuberculosis, sarcoidosis, neoplasms, systemic and fungal pathologies) was required in 33,7 % of cases. According to the results of radiological examination, pulmonary TB was diagnosed in 50,6 % of patients. In order to clarify the diagnosis, all patients underwent minimally invasive diagnostic procedures, with biopsy of the bronchi and/or lungs during endoscopic examination (79, 95,2 %) and video-assisted needle biopsy of the lungs (4, 4,8 %). According to histological examination, various forms of TB were confirmed in 54,2 % of patients, indirect signs of TB were detected in 21,7 % , and in 3,6 % of cases, a combination of neoplasm and TB was diagnosed. Cytological analysis of biopsies allowed to establish respiratory TB only in 27,7 % of patients, in 31,3 % of patients the cytogram was unremarkable.

The most effective was the molecular genetic method, which provided 98,8 % of positive results, due to the detection of MBT DNA in bronchial lavage fluids. The molecular genetic method was the most effective, providing 98,8 % of positive results due to the detection of MTB DNA in bronchial lavage. According to the microbiological examination, the culture method using a liquid medium yielded more positive results compared to the solid medium (56 versus 35, respectively).

Conclusion. A comprehensive diagnostic approach, including clinical and radiological data, results of microbiological, histological and cytological examination of biopsies obtained during minimally invasive procedures, ensures high efficiency in establishing the diagnosis of pulmonary tuberculosis in patients without typical clinical manifestations of the disease.

Key words: diagnostics, pulmonary tuberculosis, minimally invasive procedures, biopsy material.

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