

PATHOLOGICAL AND ANATOMICAL ASPECTS OF MEDICAL PATHOMORPHOSIS OF PULMONARY TUBERCULOSIS IN SURGICAL TREATMENT

(RESECTION TISSUE SPECIEMENS EXAMINATION)

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Abstract

The aim was to investigate the medical pathomorphosis of pulmonary tuberculosis (TB), particularly changes in its clinical and anatomical forms in the preoperative period on therapeutic treatment, to establish the main factors that determine such changes, and to determine the morphological signs of the activity of a specific process in tissue specimens.

Materials and methods. This was a retrospective cohort study. During the period of 2019–2023, medical records of all hospitalized patients with pulmonary TB (including pleura TB) who underwent surgical treatment and tissue pathohistological examination were selected. The inclusion criteria: the presence of microbiological and/or molecular genetic verification of TB. There were 237 cases in total. The general clinical data of the patients, the nature of drug resistance of MBT, and the results of radiological studies were analyzed. During pathological examination of the surgical specimens, macroscopic and microscopic signs were compared to clarify the form of pulmonary TB; the degree of activity of the specific process was determined morphologically.

Results. Advanced forms of lung damage, such as fibrotic-cavernous (FC) TB and cirrhotic TB, at the time of hospitalization were encountered in one case only in the first years of the observation period — 2019–2021. It was found that at the time of hospitalization, most patients were diagnosed with infiltrative (52.3 %) and disseminated (17.7 %) TB. Already at the time of surgical treatment, the number of such forms of TB was significantly lower. Nearly before surgical treatment, pulmonary TB in the form of solitary or multiple tubercles prevailed (60.3 %). The conversion of defined, most common clinical forms of pulmonary TB, was analyzed considering course of antimycobacterial therapy (AMBT) and the general course of the disease. Both in cases of infiltrative and disseminated TB at the time of hospitalization, tuberculomas reliably predominated immediately before surgical treatment, and the highest percentage of such conversion was observed after a course of AMBT. The small number of TB progression cases in these forms is explained mainly by the ineffective treatment regimen and the development of complications, which required surgical interventions. The most favorable changes in the forms of TB at the time of surgery were obtained in cases of focal TB, which, first of all, is explained by a limited area of damage without significant changes in the histological structure of the lung tissue and a short course of the disease. In cases of FCTB and cirrhotic TB, with massive pathological tissue reorganization, a conversion to more “favorable” forms does not occur.

Conclusion. In hospitalized patients, among the first diagnosed cases of the disease, an infiltrative and disseminated forms of pulmonary TB significantly prevail. They are always a manifestation of a clinically and morphologically active specific process. When establishing a preliminary diagnosis of pulmonary TB in the form of infiltrative, disseminated, focal TB and tuberculoma, solitary or multiple tuberculomas significantly prevailed in number at the time of surgical treatment. Severe forms of lung damage, which are usually typical for a long course of the disease — FCTB, cirrhotic TB, are practically not amenable to conversion with AMBT due to massive irreversible changes in lung tissue — pneumofibrosis, the presence of large cavities with thick connective tissue walls, bronchiectasis. They are characterized by constant activity of specific inflammation.

Key words: clinical-anatomical form of pulmonary tuberculosis, medical pathomorphosis.

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