

## CLINICAL, ANATOMICAL AND MORPHOLOGICAL FEATURES OF DRUG-RESISTANT PULMONARY TUBERCULOSIS, REQUIRING SURGICAL TREATMENT

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### *Abstract*

Tuberculosis (TB) remains a global medical problem and is one of the leading causes of death from infectious diseases worldwide. One of the main factors preventing successful control of the infection is the progressive increase in cases of drug-resistant TB. In order to increase the effectiveness of treatment of patients with resistant forms of TB, more and more attention is paid to a complex approach in the treatment of such patients, using surgical methods of treatment.

*The aim* of the work is to determine and compare the clinical and pathological characteristics of pulmonary tuberculosis with different grade of drug resistance to antituberculosis drugs and additional surgical treatment.

*Materials and methods.* This was a cohort retrospective study, which enrolled 49 patients with different clinical forms of pulmonary TB and defined antituberculosis drug resistance profile (MDR-TB or pre-XDR-TB groups according to the the results of drug susceptibility test). The 1-st group included MDR-TB cases (n=25) and the 2-nd group — pre-XDR-TB cases (n=24). The 1-st group consisted of 15 men and 10 women, 2nd group — 10men and 14 women, respectively. The mean age of patients in both groups was approximately the same:  $32.2 \pm 2.3$  years in grouo 1, and  $30.6 \pm 1.8$  years in group 2. Surgery was performed after completion of a standardized 6-month or individualized chemotherapy.

Clinical-morphological forms of pulmonary TB were determined based on a comprehensive analysis of the results of chest X-ray, macroscopic examination of the operative material and histological examination of the affected tissue. Morphological signs determined the activity of a specific inflammatory process during histological examination.

*Results.* The clinical-morphological forms of pulmonary TB were established in both groups based on radiological and pathomorphological examination data and a comparative analysis between the groups was carried out. Fibro-caseous TB was diagnosed almost three times more often in the group with pre-XDR-TB by chest X-ray examination. Single or multiple tuberculomas, on the contrary, were 2 times more common in the MDR-TB group. Regardless of the resistance profile, the most common surgical intervention was a resection of a segment or several segments of the lung (77.5 % of cases). The forms of pulmonary tuberculosis established by means of radiological and morphological examination were compared. In MDR-TB group, complete coincidence of diagnosis occurred in 19 out of 25 cases (76.0 %). In pre-XDR-TB group, complete agreement of radiological and morphological diagnosis observed in 11 out of 24 cases (45.8 %). Moreover, the diagnosis of tuberculoma in both groups most often coincided.

In cases with pre-XDR-TB, tuberculosis mycobacteria were detected by the cultural method in the operative material almost 2 times more often. In both groups, morphological signs of high or moderate activity of specific inflammation were observed in 70–80 % of cases.

*Conclusions.* In cases of MDR-TB, progression of specific inflammation persisted in 32 %, and in cases of pre-XDR-TB — in 21 %, respectively. Stabilization of the process before surgical treatment was established in almost half of the cases of both MDR-TB (48.0 %) and pre-XDR-TB (50.0 %) groups. Only in 20-29 % of cases was the regression of a specific process was registared. Regardless of the drug-resistant profile, different forms of pulmonary TB were presented in both study groups. Thus, just a complex

of clinical and morphological examinations makes can objectively determine the form of pulmonary tuberculosis and the grade of morphological activity of specific inflammation at the time of surgical intervention.

**Key words:** drug-resistant pulmonary tuberculosis, clinical-morphological forms, surgical treatment, histological examination.

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