

RESULTS OF TREATMENT OF PATIENTS WITH MONO- AND MULTIDRUG-RESISTANT PULMONARY TUBERCULOSIS AND PREDICTION OF RELAPSES USING COMPUTED DENSITOMETRY

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Abstract

The aim of the study was the development of densitometry indices of computed tomography (CT) for evaluation of the effectiveness of treatment of patients with mono- and multidrug-resistant pulmonary tuberculosis and predicting relapses of the disease.

Materials and methods. The results of treatment of two groups of patients with newly diagnosed pulmonary tuberculosis (NDPTB) with mono- and multi-drug resistance were analyzed. CT was performed using Aquilion TSX-101A CT-scanner by Toshiba (Japan) with a recording of the results on digital media. CT was performed before therapy, after completion of the intensive phase of antimycobacterial therapy and after completion of main course of treatment. Radiological data were compared between patients with drug-resistant and susceptible NDPTB.

Results. A significant difference in the densitometry parameters between resistant and susceptible cases by the end of the intensive phase was established. In patients with resistant NDPTB by the end of the intensive phase the majority of nodules (62,2%) tended to become more dense. At the same time point in patients with susceptible (63,4%) the nodules tended to resolve. The long-term results of treatment of patients with mono- and multi-resistant NDPTB were associated with the presence of low-density nodules in 26,0% of patients, suggesting an active inflammatory process.

Conclusion. The patients with mono- and multi-resistant NDPTB with low-density nodules need careful follow-up because of high risk of tuberculosis relapses.

Key words: computed tomography, densitometry, mono- and multi-resistant pulmonary tuberculosis, newly diagnosed pulmonary tuberculosis, relapse.

Ukr. Pulmonol. J. 2018; 2:15–18.

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