

COMPARISON OF MORPHOLOGICAL AND DENSITOMETRIC INDICATORS OF ACTIVITY OF THE INFLAMMATORY PROCESS IN OPERATED PATIENTS WITH VARIOUS FORMS OF LUNG TUBERCULOSIS

N.I. Linnik, I.V. Liskina, I. A. Kalabukha, E. N. Mayetny

Abstract

Currently, the morphological assessment of the activity of a specific inflammatory process is the most objective indicator in the diagnosis of the course of the disease. To select a treatment tactic and evaluate its effectiveness, it is much more important to be able to assess the degree of activity of the tuberculosis process in the lungs and to predict its further course even before surgery.

Objective: to study the possibility of assessing the activity of a specific inflammatory process using computer densitometry by comparing morphological and densitometric indicators of the activity of the inflammatory process.

Materials and methods. A retrospective analysis of the data of 187 operated patients with various forms of pulmonary tuberculosis was performed. There were operated 101 (54 %) women and 86 (46 %) men, aged 31 to 59 years. A comparison was made of the preoperative CT densitometric indices of lung lesions and the results of the pathomorphological findings of the dissected preparations.

Results. Low activity of a specific inflammatory process was found in 40, moderate in 59 and high in 88 patients. When comparing densitometric indices of preoperative CT with the results of histopathological findings, some differences were revealed in determining the degree of activity of a specific inflammatory process.

The highest percentage of discrepancies was found with moderate and high activity of the process, 37,3 % and 13,6 %, respectively. A subsequent analysis of these cases revealed that with a high activity of the inflammatory process, discrepancies were observed in patients with chemoresistant TB (MRTB and RRTB). According to the results of a histopathological study, it was found low or moderate activity of the inflammatory process. Most of these patients were operated for extensive processes (conglomerate tuberculoma, caseous tuberculoma).

Conclusions. The revealed differences in determining the degree of activity of the inflammatory process according to the results of histological and radiological studies may be associated with pathomorphism of chemoresistant tuberculosis, namely, with tissue features of the affected pulmonary parenchyma. Further in-depth studies of densitometry results, their "volumetric picture" of distribution in the affected lung tissue, taking into account the clinical and morphological form of tuberculosis, are required.

Key words: tuberculosis, densitometry, surgical treatment, pathohistology, activity of the inflammatory process.

Ukr. Pulmonol. J. 2020;2: 36–40.

Mykola I. Lynnyk

National institute of phthisiology and pulmonology

named after F. G. Yanovskyi NAMS of Ukraine

Leading research associate

Doctor of medicine

10, M. Amosova str., Kyiv, 03680, Ukraine

Tel./fax: 38044-275-41-22, linnyk@ifp.kiev.ua