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Effect of endobronchial valve application on the respiratory function in patients with pulmonary tuberculosis and concomitant chronic nonspecific lung diseases**D V Krasnov, E P Myshkova, S V Skluev and I F Felker**
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Introduction & Aim: The article presents a retrospective analysis of treatment results in patients with destructive pulmonary tuberculosis and concomitant chronic nonspecific lung diseases. The aim of the study was to evaluate the effect of endobronchial valve (EBV) application on the respiratory function.

Materials & Methods: 102 patients were included in an open comparative retrospective study. In 49 patients (main group), the EBV was used in the treatment, and 53 patients (comparison group) received standard anti-tuberculosis chemotherapy. The parameters of the respiratory function (RF) were measured at three critical points during hospital stage of treatment and in the long-term period.

Results: The installation of EBV led to a slight decrease in the level of vital lungs capacity (VLC) and the forced expiration volume. After removal of the valve, these RF values came to the initial level. Standard anti-TB therapy of patients in the comparison group contributed to a 6% decrease in the VLC values below the baseline, while the level of bronchial patency was preserved. At the final measurement in the main group, the proportion of patients with normal volumetric RF values increased with a simultaneous decrease in the proportion of patients with moderate and significantly reduced rates. Also in the main group, there was an increase in the proportion of patients with normal indices of bronchial patency and in the comparison group the proportion of patients with normal indices remained at the same level.

Conclusion: EBV application leads to a non-significant (less than 10% decrease in relation to the initial indices) and reversible disruption of both volume and bronchial patency of respiratory function. There is a significant irreversible decrease in the parameters of the respiratory function during the long treatment of patients with infiltrative pulmonary tuberculosis.

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