Course of HIV/AIDS-associated pulmonary tuberculosis by sensitivity of MBT strains

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Conflict of interest: none

OBJECTIVE. To study the course of HIV/AIDS-associated pulmonary tuberculosis (PTB) depending on the sensitivity of *Mycobacterium tuberculosis* (MBT) strains.
MATERIALS AND METHODS. 103 medical files of patients with co-infection HIV/AIDS/TB for the period 2020-2024 were analyzed. Patients were divided into two groups: 1st group – 42 patients with co-infection HIV/AIDS/TB, who isolated sensitive strains of MBT to antimycobacterial drugs (AMBD); 2nd group – 61 patients with co-infection HIV/AIDS/TB, who isolated resistant strains of MBT.

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Microbiological study included: detection of MBT in sputum by smear microscopy, seeding on the Lewenstein – Jensen medium, typing of isolated mycobacteria on Bactec MGIT 960, conducting a drug sensitivity test of MBT strains to AMBD, molecular genetic study.
HIV/AIDS was diagnosed by rapid test; polymerase chain reaction was used to determine viral load.
Statistical analysis of the results obtained was carried out on the basis of the software package in Excel.
RESULTS AND DISCUSSION. In both groups, 1.5 times dominated by men aged 31 to 50 years. In serious condition, 23.8 % of patients of the 1st group and 9.8 % – of the 2nd were hospitalized. The average number of bed-days in the hospital of the 1st group was 23.1±2.1, and the 2nd – 61.7±4.5. Patients of the 2nd group died 2.2 times more often.
The resistance profile of 2nd group showed that rifampicin (R) resistance was 2 times more likely than isoniazid, rifampicin, pyrazinamide, ethambutol (HRZE) and pre-extensively drug-resistant TB (32.8 vs 16.4 %; $p<0.05$). Resistance to HRZ (1.4 %) and resistance to new AMBD (bedaquiline and delamanid) were the least often noted.
In the 2nd group miliary PTB (1.7 times) and infiltrative PTB (2.0 times) prevailed. Group 1 showed an increase in the frequency of disseminated PTB. Patients of the 2nd group were 2 times more likely to complain of severe intoxication, cachexia, patients of the 1st group – of hemoptysis. In both groups, sepsis, pericarditis, and spontaneous pneumothorax were diagnosed with almost the same frequency. Respiratory failure was 1.5 times more often detected in the 2nd group, chronic obstructive bronchitis 1.7 times – in the 1st. In both groups, chronic hepatitis, cirrhosis, ascites and toxic liver damage were noted. In the 2nd group, chronic hepatitis B was observed 2 times more often. Among the patient with associated HIV/AIDS/TB, damage to the nervous system and the organ of vision was observed 2 times more often in the 2nd group than in the 1st.
CONCLUSIONS. Chemoresistant TB on the background of HIV/AIDS was much more difficult. The combination of the two diseases contributed to disability in 24.4 % (10) of patients with sensitive TB/HIV and in 55.7 % (34) with chemoresistant TB/HIV or even death in 11.9 % and 26.2 %, respectively.

KEY WORDS: co-infection HIV/AIDS/TB, sensitive and chemoresistant pulmonary tuberculosis.