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Influence Of Concurrent Pathology On The Clinical Course Of Pulmonary Tuberculosis

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Abstract
A total of 2105 patients with pulmonary tuberculosis were examined, of which 19.5% of patients were found to have concomitant pathology. It was found that in patients with concomitant pathologies, tuberculosis is severe, with severe symptoms of intoxication and respiratory manifestations. Isolation of MBT and the presence of drug resistance were higher in the group of patients with concomitant pathology. The presence of concomitant pathology adversely affects the clinical course of pulmonary tuberculosis.
Keywords: pulmonary, tuberculosis, MBT

1. INTRODUCTION.

Among infectious diseases that have a negative impact on human health, tuberculosis occupies a special place, which remains a priority health problem throughout the world. Among the factors contributing to the development and severe course of tuberculosis, a special place is occupied by the presence of concomitant pathology, which significantly affects the reactivity of the body and reduces the effectiveness of tuberculosis treatment, worsens the prognosis of the disease (Khakimov M.A. et al., 2015). Pulmonary tuberculosis often develops against the background of diseases , which lead to a dysfunction of organs and systems, and with a joint flow, they have a mutually aggravating interaction. This complicates the timely diagnosis of tuberculosis, and during treatment it entails forced polypharmacy, the development of drug complications and treatment failures (Bagisheva N.V. et al., 2019). In recent years, the number of tuberculosis patients with concomitant diseases has been increasing, which pose serious problems for TB doctors [Mordyk A.V. et al., 2016]. Literature data show that tuberculosis is increasingly joining other diseases, at the same time background pathology can contribute to the development of tuberculosis [Saidova Sh.M. 2001].

Purpose: explore the influence of concomitant pathology on the course in patients with pulmonary tuberculosis.

2. MATERIAL AND METHODS.

The case histories of 2105 patients with tuberculosis treated at the center of phthisiology and pulmonology were studied, of which 1359 (64.6%) were men, 746 (35.4%) women in 2016-2019.
The presence of concomitant diseases was diagnosed in (19.2%) patients. Male patients predominated among patients with concomitant diseases. 244 (60%), women were 162

(40%). Among the comorbidities there were such as: HIV infection 61 (15%), diabetes mellitus (DM) type 1 - 25 (6.3%), diabetes mellitus (DM) type 2 - 289 (71.3%) and patients for a long time taking glucocorticosteroids -30 (7.4%)
The patients were divided into two groups: 1 group of patients with concomitant diseases of 405 patients and 2 group of patients with pulmonary tuberculosis without concomitant diseases - 215 patients.

3. RESULTS AND DISCUSSION.

In group 1, the average age of patients was 52.8 ± 3.5 years, men were 60%, women - 40%. In group 2, the average age was 44.3 ± 4.2 years, men were 65.6%, women - 34.4%. When analyzing the incidence of clinical forms of pulmonary tuberculosis (Table 1), it was found that among patients from group 1 the most the most common forms of TB were infiltrative TB (55%), fibrous cavernous TB (25.7%). In patients from group 2, without concomitant pathology, the most common were infiltrative TB (45.1%), fibrous-cavernous TB (24.6%) and focal TB (14.4%)

Table 1
The incidence of clinical forms of pulmonary TB in the examined patients

№	Clinical forms of TB	Group 1	Group 2
1.	Focal TB	27(6,6±1,2%)	31(14,4±2,3%)
2.	Infiltrative TB	225(55±2,4%)	97 (45,1±3,3%)
3.	Disseminated TB	25(6,2±1,3%)	14(6,5±1,6%)
4.	Cavernous TB	18(4,4±2,1%)	11(5,1±1,8%)
5.	Fibrocavernous TB	105(25,7±1,6%)	53(24,6±2,8%)
6.	Cirrhotic TB	5(1,2±1,0%)	9(4,1±1,3%)

The analysis of the intensity of symptoms of intoxication in the examined patients was carried out (Fig. 1). More often, there were patients with moderately expressed (63%) and severely expressed symptoms (24.2%) of tuberculous intoxication in group 1 of patients with concomitant pathologies. At the same time, in patients without concomitant pathology, patients without symptomatic and moderately severe intoxication prevailed (64%).

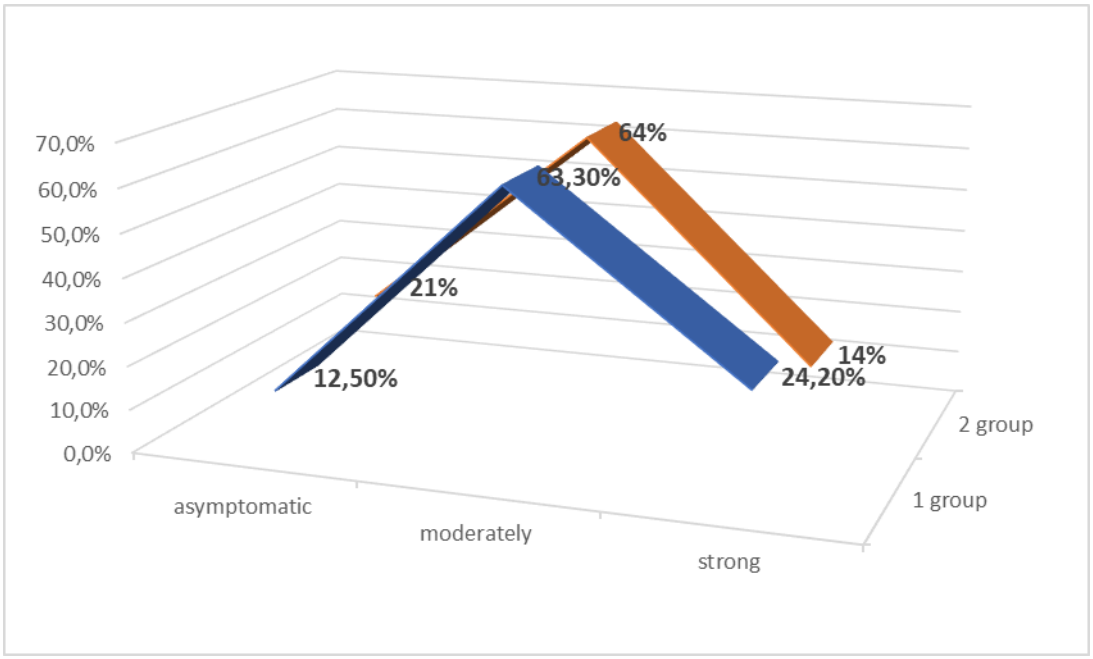

Fig.1. The severity of symptoms of tuberculous intoxication in the examined patients

An analysis of the severity of respiratory clinical manifestations was also carried out. (fig. 2). Strongly expressed (79%) and moderately expressed (19.7%) respiratory manifestations were more common in patients of group 1.

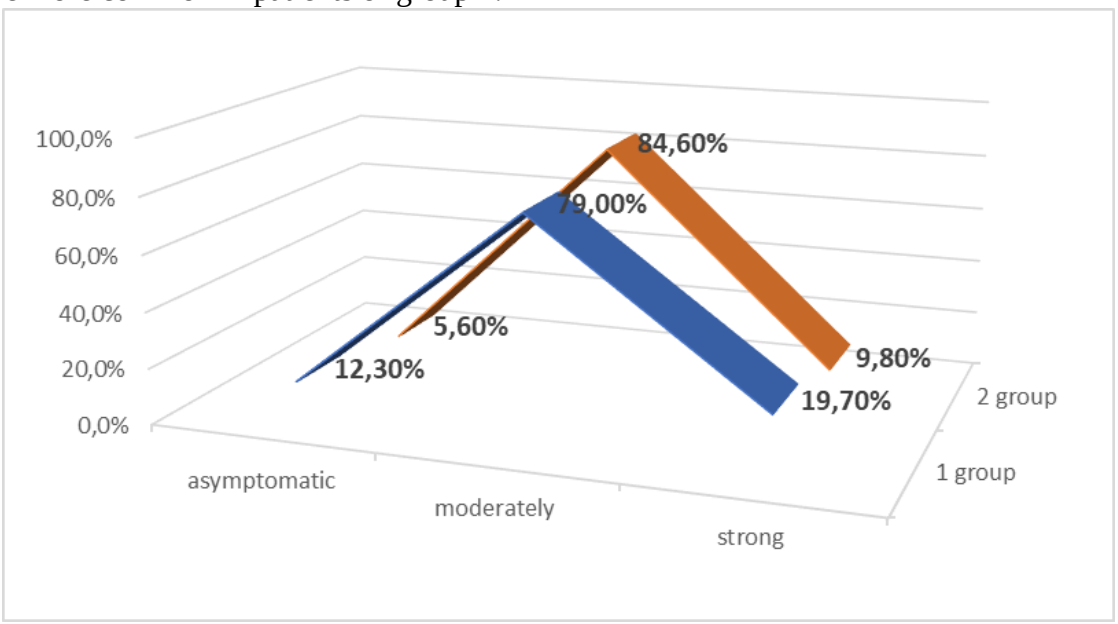

Fig.2. Intensity of respiratory clinical manifestations of TB in examined patients

When examined by the Gen Expert PCR method, the isolation of mycobacterium tuberculosis (MBT) in sputum was noted in group 1 in 67.9 ± 2.1%, and in group 2 in 57.2 ± 3.3% of patients (P≤0.05). 192 (47.4 ± 2.2%) of the 1st group of patients had resistance to rifampicin and 90 (22.2 ± 2.9%) patients showed resistance to the first line of drugs. In group 2, 34 (15.8 ± 3.3) patients had resistance to rifampicin. 38 (18.0 ± 3.0%) patients had resistance to the first line of drugs

Table2
The volume of lung damage in the examined patients

criteria	**Group 1**	**Group 2**
Unilateral defeat	60,0%	81,0%
Bilateral defeat	40,0%	29,0%
Multiple caverns	55%	35%
Single caverns	45%	65%

Analysis of the diameter of cavities in the lung in patients by CT, MSC showed that in patients of group 1 with concomitant diseases, cavities with a diameter of 2-4 and more than 6 cm were found significantly more often than in patients without concomitant pathology. Complications of TB were observed in 253 patients (62.5%) in group 1: 230 patients (90.1%) had respiratory failure, 23 (8.9%) patients had hemoptysis. In group 2, complications were observed in 143 patients (66.5%): of the bottom, 122 (85.3%) patients had respiratory failure, 28 patients (13.0%) had hemoptysis.
Side effects of drugs were observed in 343 patients (84.7%) from group 1, and in group 2 side effects were observed somewhat less frequently in 156 (72.5%) patients.

4. CONCLUSION.

Thus, pulmonary tuberculosis against the background of concomitant diseases of the pathology is characterized by the predominance of destructive forms of tuberculosis, more pronounced symptoms of tuberculosis intoxication and respiratory manifestations of the main pulmonary process, massive bacterial excretion, high resistance of MBT to chemotherapy drugs, a larger volume of lung tissue damage and large decay cavities. Joining tuberculosis of any concomitant pathology, influencing each other, creates, as it were, a new pathology [7]. In this case, the concomitant disease aggravates the course of the main process in the lung, causes its unfavorable dynamics, worsens the prognosis. The presence of concomitant pathology creates the preconditions for the development of adverse reactions from chemotherapy drugs and thereby reduces the effectiveness of tuberculosis treatment and worsens the prognosis of the disease.

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