Risks of recurrence in people with pulmonary tuberculosis

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OBJECTIVE. To assess the risk of relapse in patients with pulmonary tuberculosis (PTB).
MATERIALS AND METHODS. 569 people with relapsed PTB (RPTB) were selected from the TB register (e-TB manager programme): 300 with a first case treatment outcome of "completed treatment" and 269 "cured". The groups were compared according to the course and outcome of treatment of RPTB, clinical characteristics of the first case, medical and social risk factors, and all patients with RPTB were compared with the group of newly diagnosed PTB (NDPTB). Mathematical and conventional statistical methods were used to analyse.
RESULTS AND DISCUSSIONS. It was found that patients with RPTB are a difficult group because more than ½ of them have lung destruction, ¾ isolate mycobacterium tuberculosis (MBT), and more than ½ have resistance to antimycobacterial drugs (AMBD). In 73.6 % of them, medical and social risk factors were noted that may have caused or contributed to TB relapse and negatively affected the results of treatment. These factors include: severe comorbidities in 53.7 %, alcohol and drug abuse in 34.9 %, HIV infection in 30.5 %, and others (homelessness, release from prison, contact with a TB patient, unemployment, smoking, etc.); 62.1 % of patients had ⩾2 risk factors at the same time.
We consider the effectiveness of treatment of this category of patients to be insufficient, as the outcome of the main course of treatment was unsatisfactory in more than half of them (48.5 % of unsuccessfully treated, 4.7 % interrupted treatment, 8.3 % died), and taking into account repeated courses, the rate of effective treatment in some of them was only 65.6 %.
There was no significant difference (neither in clinical characteristics nor in medical and social risk factors) between the groups of patients "cured" or "completed treatment" as a result of treatment of the first case of TB, but it was found that only 23.2 % of patients with RPTB were found to be resistant to AMBD at the first case of the disease, and 50.0 % of them had it, with multidrug resistance (MDR) in half of them.
It has been statistically proven that patients with RPTB are more likely to have the following symptoms than patients with NDPTB: lung destruction (43.2±3.2 vs. 20.4±4.0 %, $p<0.05$), sputum isolation of MBT (38.1±3.3 vs. 24.9±3.9 %, $p<0.05$), multi- and poly-resistance of MBT to AMBD (30.2±8.1 vs. 9.5±4.3 %, $p<0.05$), various medical and social risks (73.6±2.2 vs. 44.5±3.4 %, $p<0.05$), including alcohol abuse (21.3±3.7 vs. 8.7±4.3 %, $p<0.05$ %), unemployment (51.1±2.9 vs. 21.9±4.0 %, $p<0.05$), concomitant diseases (39.5±3.3 vs. 8.5±4.3 %, $p<0.05$), HIV infection (22.5±4.0 vs. 4.9±4.4 %, $p<0.05$) and others – lack of a fixed place of residence, release from prison, contact with a TB patient, lack of permanent employment, smoking, etc. (64.3±2.5 vs. 8.3±4.3 %, $p<0.05$), as well as ⩾2 risk factors at the same time (45.7±3.1 vs. 20.0±4.0 %, $p<0.05$), which confirms the role of the above factors as probable risks of relapse in TB patients.
CONCLUSIONS. Since the role of unfavourable NDPTB course, medical and social risk factors such as unemployment, severe comorbidities, alcohol abuse, HIV infection and some others (belonging to persons of no fixed abode, release from prison, contact with a TB patient) as possible causes of the development (or contributing to) RPTB, which subsequently negatively affect treatment outcomes, patients with these factors should be considered a particularly dangerous population for the development of PTB and, accordingly, should be screened and monitored for life in risk groups accordingly.
Given that the detection of MDR-TB in the first case of PTB is the most dangerous risk factor for RPTB, it is necessary to introduce the determination of MDR-TB resistance in all patients with NDPTB and, despite the results of their treatment, to follow up such persons in risk groups.
Late detection of RPTB (in ¾) indicates organisational shortcomings of primary care in TB control, primarily in the formation of risk groups and work with them, and requires the implementation of preventive measures taking into account the new realities and challenges of wartime.

KEY WORDS: pulmonary tuberculosis, relapse, risks, survivors.