THE SIGNIFICANCE OF TUBERCULOSIS EPIDEMIC CHARACTERISTICS AMONG MEDICAL PERSONNEL CONDUCTING ACTIVITIES IN FORENSIC MEDICAL PRACTICE

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ANNOTATION

The goal is to propose preventive methods based on identifying the characteristics of the tuberculosis-related epidemiological process in medical personnel performing autopsies of bodies with active tuberculosis. Today, tuberculosis infection is characterized by multiple drug resistance, which complicates the treatment aspects of patients and creates tension for infecting others. The situation regarding the incidence of tuberculosis among medical workers working as proctors in Surgut city for the period from 2011 to 2018 was studied. A high level of tuberculosis morbidity among medical workers - pathologists and forensic medical examination physicians - is shown, which requires appropriate anti-epidemic measures among specialists of these categories.
Keywords: tuberculosis, medical personnel of the forensic medical examination bureau, pathologists.

Entry Tuberculosis is the most important socially significant pathology in Russia. Today, tuberculosis infection is characterized by multiple drug resistance, which complicates the treatment of patients and creates tension for the infection of others. Medical workers who have contact with tuberculosis patients are especially susceptible to tuberculosis infection and the development of this disease. Special risk groups are represented by phthisiologists, as well as medical workers who, due to their professional activities, have contact with tuberculosis patients or patients who have died from tuberculosis. High morbidity was noted among the staff of anti-tuberculosis institutions and forensic medical examination bureau employees. Scientifically based, taking into account the epidemiological characteristics of temporary tuberculosis (considering the rapid spread of multi-resistant strains of mycobacteria), and truly effective preventive measures for this disease among medical institution staff have not yet been developed. Medical workers are exposed to numerous risk factors of social, hygienic, and epidemiological nature. Studying the peculiarities of the tuberculosis epidemiological process in medical workers performing autopsies of bodies with active tuberculosis presents significant scientific and practical interest in terms of accumulating scientific

data and developing recommendations for reducing the risk of tuberculosis among them. Medical professionals carrying out prospecting activities - forensic medical experts and pathologists - are at high risk of developing tuberculosis due to professional contact with sources of tuberculosis infection. Recently, cases of tuberculosis have been registered in Surgut among representatives of the professional community engaged in prospecting activities (pathological-anatomical and forensic medical examinations).

Materials And Methods The study was conducted as a cohort retrospective analysis of cases of tuberculosis among medical workers working as proctors in Surgut city for the period from 2011 to 2018. The following were used as primary sources: accounting form No. 089/u-tub "Information about a patient with a diagnosis of active tuberculosis for the first time in life, with a recurrence of tuberculosis"; medical record of a tuberculosis patient (form No. 081/u) .

Descriptive and comparative statistics methods were used for the analysis. Microsoft Excel was used for data processing.

Results And Their Discussion During the period from 2011 to 2018, in Surgut city, out of 23 doctors who carried out prospector activities (10 pathologists and 13 forensic medical experts), during which they performed sectional examination of bodies of individuals suffering from tuberculosis, 5 people contracted tuberculosis. Of the total number of patients with tuberculosis, three (60%) were pathologists, and two (40%) were forensic medical experts. By sex, cases of detection of tuberculosis were distributed as follows: 3 cases (60%) were registered in men; 2 cases (40%) - in women.

In the order of the Ministry of Health of the Russian Federation dated March 21, 2003, No. 109 "On Improving Anti-Tuberculosis Measures in the Russian Federation" [11], high-risk factors for tuberculosis are listed: epidemiological: contact with a person or animal with tuberculosis;

Medical and biological: diabetes mellitus, ulcer disease, psychoneurological pathology, frequent ARVI in the anamnesis; chronic diseases of various organs and systems with a torpid, wave-like course and ineffectiveness of traditional treatment methods; long-term (more than a month) use of cytostatic, glucocorticoid drugs, immunosuppressants; HIV infection, perinatal contact in children due to HIV infection; social: alcoholism, drug addiction, being in places of deprivation of liberty, unemployment; homelessness of children and adolescents, children entering orphanages, orphanages, social centers, etc.; migration.

The epidemiological burden on people performing autopsies of deceased individuals diagnosed with tuberculosis depends on the frequency of contact with the infectious agent, the extent of bacterial contact, and the pathogen's properties, such as pathogenicity and resistance to anti-tuberculosis drugs. The average annual number of

autopsies of patients with tuberculosis as a primary or comorbid disease performed by Surgut prospectors for the analyzed period was 114 per year. Of these, 98.8% of autopsies were performed by pathologists; 1.2% - by forensic medical experts. For the study, it was not possible to obtain information on the degree of dependence between the intensity of the epidemiological load and the incidence of tuberculosis among the pathoanatomists and forensic medical experts of Surgut.

Of the total number of deceased individuals, 48.3% showed drug resistance to the combination of Isoniazid [H] and Rifampicin [R], of which 30.2% showed multiple drug resistance (MDR), and 18.1% showed broad drug resistance (WDR). Thus, it can be stated that Surgut city prospectors carry out their work activities in a tense epidemiological setting characterized by contact with a large number of drug-resistant forms of tuberculosis mycobacteria (Mycobacterium tuberculosis).

Of the 5 analyzed cases of tuberculosis, the Mycobacterium tuberculosis pathogen was isolated from the sputum of 4 patients. The study of the obtained culture for sensitivity to anti-tuberculosis drugs was carried out in accordance with the Instruction on Unified Microbiological Research Methods for the Detection, Diagnosis, and Treatment of Tuberculosis (Appendix No. 11 to Order No. In 3 patients, the Mycobacterium tuberculosis culture was sensitive to all first-line anti-tuberculosis drugs. In one patient [N*], resistance of Mycobacterium tuberculosis to the combination of anti-tuberculosis drugs HRFgA/K (SHLU) was established. This patient differed from her colleagues in that her tuberculosis disease occurred against the background of taking genetically engineered biological drugs (GIBP) from the class of alpha tumor necrosis factor inhibitors (IFNO-α). IFNO-α causes various changes in the human immune system, among which it is worth distinguishing the separation of tissue macrophages (including alveolar macrophages), which are part of the antigen-presenting cell system (together with dendritic cells and B-lymphocytes), and natural killers (NK-cells). The dissociation of this link of immunity blocks the organism's further cellular response to the introduction of the infectious agent, which is normally carried out by activated NK cells that produce TNF-γ, which, in turn, activates macrophages of the bloodstream, ensuring their movement to the lesion site. Thus, in certain situations, IFNO-α can cause critical changes in the patient's immune system, which can be characterized as a drug-induced syndrome of acquired immunodeficiency.

Conclusion: Among medical workers carrying out prospector activities in Surgut city, there is a high level of tuberculosis morbidity, and they experience significant epidemic stress from the tuberculosis pathogen, including its drug-resistant forms.

The current sanitary regulations do not regulate measures to protect employees of non-tuberculosis institutions from tuberculosis, including providing special clothing, etc. For proper

protection of medical workers carrying out prospector activities from tuberculosis, it is necessary to make appropriate changes to the sanitary-epidemiological rules SP 3.1.2.3114-13 "Tuberculosis Prevention." Taking IFNO-α can increase the risk of both tuberculosis and its drug-resistant forms (MLU and SLU) in the patient. To clarify this hypothesis, it is necessary to systematize information on the tuberculosis of individuals receiving IFNO-α at the state level by making appropriate changes to accounting form No. 089/u-tub "Notification of a Patient with First-Time Diagnosis of Active Tuberculosis with Tuberculosis Recurrence" and form No. 33 "Information about Tuberculosis Patients."

Literature

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