

Complex Social-Epidemiological Study of the Spreading the Tuberculosis in Modern Condition

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Abstract:

Tuberculosis is the most important epidemiological and physician-social problem. At present HIV-infection has the essential influence on its spreading. Sharply increased the morbidity, but death-rate for tuberculosis combined with HIV-infection reaches 90%. Established tense epidemiological situation with tuberculosis and tuberculosis combined with HIV-infection dictates need of the improvement of organizations of the fight with tuberculosis.

Keywords: social-epidemiological study, tuberculosis.

At the beginning of the 21st century, tuberculosis continues to cause enormous damage to humanity and claim more lives than any other infectious disease. There is still an increase in indicators characterizing the prevalence of tuberculosis infection. The Partnership of the WHO Regional Office for Europe "Stop Tuberculosis" has set a goal by 2015: to halve the prevalence and mortality from tuberculosis compared to 1990. It was established in October 2006 to involve key European stakeholders in taking adequate measures to combat the tuberculosis epidemic. Currently, tuberculosis is one of the most pressing health problems in the world.

Currently, according to WHO, 1/3 of the world's population is infected with tuberculosis on the planet. Every year, 3-5 million people die from tuberculosis in the world, which accounts for 25% of all deaths.

The epidemiological situation of tuberculosis is very different in different countries and regions. In many economically developed countries of Western Europe, in the USA, Canada, Japan, and Australia, low rates of tuberculosis are noted. Tuberculosis morbidity and mortality rates are

significantly higher in developing countries in Africa, Latin America, and Southeast Asia. The highest incidence rates are observed in sub-Saharan Africa (up to 150-400 per 100,000 population), and the largest absolute number of tuberculosis cases is registered in Southeast Asia.

In 1993, tuberculosis was declared a global problem by the World Health Organization and, despite the measures taken, the situation with tuberculosis remains very tense.

There is a spread of multidrug-resistant tuberculosis and tuberculosis combined with HIV infection, which allows the infection to affect all segments of the population if preventive measures are neglected.

The level of morbidity directly depends on housing conditions, working conditions in production, on the material wealth of the population, the material and technical state of health care organizations, on the observance of a healthy lifestyle by everyone, without exception, and so on.

The causative agents of tuberculosis are mycobacteria. The source of infection is a person suffering from tuberculosis, as well as cattle affected by this disease. The patient releases tuberculosis bacilli into the external environment when coughing, sneezing, talking with saliva, mucus, and sputum. Healthy people become infected with tuberculosis by inhaling air containing droplets of saliva and sputum of the patient, as well as dust particles contaminated with the tuberculosis bacillus. Infection can also occur through contact with the patient's belongings, as well as through consumption of raw milk from cows with tuberculosis.

This disease can develop in any organ - lungs, kidneys, intestines, bones and joints, meninges. But most often the respiratory organs are affected. In some people, tuberculosis develops rapidly, with high fever, cough and sputum. In others, it is more sluggish and is accompanied only by weakness, fatigue, low temperature (37.0 - 37.5) degrees, slight coughing, and in some cases asymptomatic.

Among patients with tuberculosis, a significant proportion is the unemployed population - and this is one of the problems of our time. Most of these people, having been treated with difficulty for several months, voluntarily leave the hospital. Since then, treatment has been ineffective, and the disease progresses rapidly. What kind of recovery can we talk about in this case? And needless to say, a tuberculosis patient who leaves the hospital is extremely dangerous. First of all, close relatives and acquaintances suffer; the incidence of contact persons is 3-4 times higher than in the general population.

Patients with tuberculosis are subject to long-term continuous treatment. The duration of treatment ranges from four months to a year or more, depending on the form of the disease. Early diagnosis and timely treatment are extremely important for the effectiveness of treatment.

Tuberculosis is an infectious disease that can have an acute or chronic course, with periods of exacerbation and subsidence, with a long-term course and high rates of disability and mortality. Initially, tuberculosis was considered a disease only of socially vulnerable people, the unemployed, migrants with bad habits, but according to the latest data, tuberculosis began to affect people of working age, with an average and high standard of living. A patient with tuberculosis is the main source of infection, therefore isolation of the patient and his treatment is one of the factors in preventing the spread of tuberculosis. Prevention of tuberculosis is simultaneously health, social, and hygienic measures aimed at strengthening the health of the population, preventing the occurrence and mass spread of tuberculosis and timely detection of children and adolescents infected with *Mycobacterium tuberculosis* using the method of annual tuberculin diagnostics and tuberculosis patients among the population.

Types of prevention:

1. Social prevention is a set of activities that have a positive impact on the health of the general public and thereby increase the body's resistance to tuberculosis. Aimed at improving environmental conditions, increasing the material well-being of the population, strengthening their health, improving nutrition and living conditions, developing mass physical culture and sports, carrying out measures to combat alcoholism, drug addiction, smoking and other bad habits, and combating occupational hazards. Individual prevention of tuberculosis is also important - first of all, a healthy lifestyle.

Sanitary prevention and tasks:

- early detection of the disease, which is only possible with an annual fluorographic examination of the population;
- hospitalization of patients in specialized institutions;
- treatment: inpatient, outpatient and sanatorium treatment;
- carrying out sanitary and hygienic, anti-epidemic measures in the foci of tuberculosis (i.e. where a patient with open form of tuberculosis lives or lived during the last month or died) - at the place of work or training.

This includes ongoing or final disinfection, treatment of the patient, and isolation of children. Registration of all contacts with an anti-tuberculosis institution, fluorographic examination of all adult family members, and children and adolescents using tuberculin diagnostics - Mantoux test and DIASKINTEST test - 2 times a year and 2 times a year preventive courses of treatment. Adults are observed until the patient stops bacterial excretion, children and adolescents until the patient is transferred to a dispensary group - clinical cure. Children under 3 years of age are observed until the patient is removed from the register. Supply of disinfectants; training the patient and his family in sanitary and hygienic skills.

3. Specific prevention – aimed against the causative agent of tuberculosis, preventing infection and preventing the development of the disease. A healthy newborn receives the very first anti-tuberculosis protection on days 3-7 of life in the maternity hospital with the BCG-M vaccine. As a result, specific immunity against *Mycobacterium tuberculosis* is developed. Immunity after BCG vaccination lasts on average 3-5 years. To monitor the state of this immunity, children and adolescents undergo tuberculin diagnostics (Mantoux test) from 12 months of age. The effectiveness of anti-tuberculosis BCG vaccinations is manifested in the fact that the incidence of severe forms of tuberculosis in children and adolescents - miliary tuberculosis, tuberculous meningitis, caseous pneumonia - has significantly decreased; many children, when encountering mycobacteria, are not infected at all, or the development of minor forms of tuberculosis is noted. Mortality from tuberculosis is significantly lower among vaccinated children and adolescents than among unvaccinated children. Dear parents, do not refuse to vaccinate your newborn with BCG in the maternity hospital, or to carry out tuberculin diagnostics; remember that your refusal may lead to illness.

By observing and performing sanitary and specific preventive measures, you can protect yourself and your families from the main infectious enemy of humanity – tuberculosis.

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