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DIFFERENTIAL DIAGNOSIS OF CHRONIC TRANSIENT CHLAMYDIA AND MYCOPLASMAL PNEUMONIA WITH PULMONARY TUBERCULOSIS

Khakimova Ruzikhon Abdurakhimovna
Docent of the Department of Phthisiatry and Pulmonology
Andijan State Medical Institute
Andijan, Uzbekistan

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Abstract:

The growth of secondary immunodeficiency in the population and the increasing role of atypical pathogens against this background have set new challenges for doctors and researchers. Against this background, pneumonia becomes severe and protracted. Diagnosis of atypical pathogens such as Chlamydophila pneumoniae, Mycoplasma pneumoniae (M. pneumoniae), Legionella pneumophila is particularly difficult. Currently, there are no uniform standards for the diagnosis of these pathogens, and the available data are only advisory in nature.

Currently, tuberculosis remains one of the leading causes of death among infectious diseases worldwide. About 3 million people die from tuberculosis every year in the world, and in developing countries one out of every 5 deaths is associated with tuberculosis. But even in developed countries, tuberculosis has again become a serious problem in severe epidemic conditions, 50 - 52% of tuberculosis patients are detected in medical institutions of the general medical network when patients address complaints characteristic of inflammation of the bronchopulmonary system. Moreover, the majority of patients complain of an acute onset of the disease, cough with sputum, fever, weakness, and changes in the X-ray.

Keywords: Frequently ill children, protease inhibitors, infectious diseases cabinet, computed tomography, Mycobacterium tuberculosis, multidrug resistance, magnetic resonance imaging.

RELEVANCE. These changes have led to an equally rapid deterioration of the epidemiological situation of tuberculosis. Significant segments of the population migrated from regions with a high incidence of tuberculosis to the central part of Russia. The incidence among migrants increased catastrophically and was practically not controlled.

Preventive measures to combat tuberculosis in a number of "hot spots" not only among adults, but also among children were practically not carried out. Tuberculosis patients, as a rule, were either not treated or received substandard treatment, joining the ranks of drug-resistant Mycobacterium tuberculosis.

Until recently, the increase in the incidence rate was at least 10% annually. To be fair, it should be noted that in the 90s there was, however, a not so dramatic increase in the incidence of tuberculosis all over the world, including highly developed countries. The forecast of the elimination of tuberculosis on the globe or in individual countries by the end of the 20th century, expressed by WHO experts in the 60s, did not materialize. According to WHO, there are 8 million new cases of tuberculosis in the world every year and about 3 million people die from this infection. According to preliminary calculations, the incidence will increase, especially in those countries where they forget that tuberculosis is not only an infectious, but also a social disease. A third of the world's population is already infected with Mycobacterium tuberculosis, but no more than 5-10% of those infected will get sick during their lifetime, since natural resistance to this infection plays a significant role, therefore socio-economic living conditions are also important.

Speaking of tuberculosis, it is impossible not to take into account the fact that in the last decade the manifestations of tuberculosis in the adult population have changed significantly. According to a number of authors, more than half of the patients have an acute course with a hectic temperature, pronounced changes in peripheral blood. Complications of pulmonary tuberculosis have become more frequent. The massiveness of bacterial excretion and drug resistance of Mycobacterium tuberculosis to the main anti-tuberculosis drugs. All this leads to a decrease in the effectiveness of treatment and disability of patients. The risk of recurrence of the disease has increased significantly - the number of patients with reactivation of the tuberculosis process has increased and amounts

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to 8.2 per 100 thousand of the population.

Due to the late detection of tuberculosis in adults, the risk of infection in children has increased. The infection rate of children living with patients is 2 times higher than that of children from a healthy environment. Since 1990, there has also been an increase in the incidence of children: their incidence in foci has increased in Russia by more than 3 times (from 0.16 to 0.56%), exceeding the total incidence of children by 50 times. Among children with tuberculosis who come into contact with patients in the family, there is a significant number of young children with disseminated forms of tuberculosis. Respiratory tuberculosis prevails in the structure of newly ill children in Russia (78%). The main form is tuberculosis of the intrathoracic lymph nodes. In children, the frequency of bacterial excretion in respiratory pathology was 3.0%. Against this background, in adolescents, the tendency to spread the tuberculosis process approached that in adults with predominant damage to lung tissue in the form of its infiltrative forms with bacterial excretion in 80% of cases.

Prevention and early detection of the disease are of paramount importance for the fight against tuberculosis in children. Immediately after diagnosis, it is necessary to start treatment in a timely manner, which is based on antibacterial therapy. To date, the country's phthisiologists have accumulated significant experience in the prevention, timely detection and treatment of tuberculosis. Monographs and scientific articles reflect with sufficient completeness the successes of the fight against tuberculosis among the adult population. At the same time, it is known that the first encounter with tuberculosis infection, ending in infection, and in some cases with the disease, occurs in childhood and adolescence, therefore, the main measures of tuberculosis prevention should be carried out in these age groups. More than 50 years of specific prevention of tuberculosis has led to significant changes in its clinical course in children and adolescents, which affected the pathomorphosis of the disease. Damage to the lymphatic system, pronounced bronchoadenitis were observed both in the pre-antibiotic period and in the first years of antibacterial treatment. Due to various reasons, however, the lymphatic system could not serve as a barrier and delay the spread of infection, lung and other organs were affected. The spread of the process in the lungs, developing complications became leading in the picture of the disease. Now, in conditions of systematic anti-tuberculosis vaccination, increasing the overall resistance of the body of children, the protective role of the lymphatic system is more clearly revealed, the infection in which is delayed for a long time; in some cases, local forms of the disease do not develop, in others, there is a different degree of damage to the lymph nodes, while in recent years "small" forms of bronchoadenitis are increasingly common.

THE PURPOSE OF THE STUDY. Improving the effectiveness of methods of differential diagnosis of chlamydial and mycoplasma pneumonia in children and pulmonary tuberculosis.

RESEARCH MATERIALS AND METHODS. In the management of patients, along with general clinical studies, special research methods were used, including both routine methods and innovative research.

We studied 67 sick children who were sent for examination to an antitubercular dispensary for the diagnosis and differential diagnosis of tuberculosis in children with chronic pneumonia. The reason for referral to a tuberculosis facility was the similarity of clinical symptoms, ineffective treatment with broad-spectrum antibiotics. The clinical symptoms were also very similar to tuberculosis: prolonged subfebrility, cough with a small amount of sputum, weakness, weight loss, decreased appetite, and most importantly, various changes were radiographically revealed on the overview radiograph: the presence of focal, focal shadows, areas of infiltrates, changes in the root of the lung.

THE RESULTS OF THE STUDY. The material for performing a blood test for chlamydia and mycoplasmosis is blood serum taken from a vein. For the reliability of the results of the study, it is necessary to take an analysis on an empty stomach. Decoding the blood test for chlamydia and mycoplasma allows you to determine the type of infection and assess the dynamics of the disease. The accumulated statistics of the results of the analyses performed by the ELISA method will be indicative in assessing the effectiveness of treatment. Decoding of the blood test for chlamydia and mycoplasma by ELISA At the beginning of the disease, a blood test for chlamydia or mycoplasmosis shows the presence of IgM antibodies. The duration of the initial stage of the disease depends on the type of infection and the individual characteristics of the human immune system, but usually ranges from one to three weeks after infection. If IgM antibodies are detected in the blood test for chlamydia or mycoplasmosis, the doctor diagnoses the acute phase or recurrence of a chronic disease. A month after infection with cellular parasites, IdA antibodies begin to be produced in the body. Last of all (on average, after about four weeks), IgM antibodies appear in the blood test results. A decrease in the number of these antibodies is an indicator of the effectiveness of treatment. Thus, the following indicators are displayed in the decoding of the blood test for chlamydia and mycoplasma: anti-Chlamydia trahomatis IgM, anti-Chlamydia trahomatis IgA, anti-Chlamydia trahomatis IgG, anti-Chlamydia pneumonia

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IgM, anti-Chlamydia pneumonia IgA, anti-Chlamydia pneumonia IgG and anti-Mycoplasma trahomatis IgM, anti- Mycoplasma trahomatis IgA, anti- Mycoplasma trahomatis IgG, anti-Mycoplasma pneumonia IgM, anti-Mycoplasma pneumonia IgA, anti- Mycoplasma pneumonia IgG. Decoding of the blood test performed by the CPR method The PCR (polymerized chain reaction) method is currently recognized as the most effective for the diagnosis of infectious diseases. Based on microbiological analysis, it works with genetic material, thereby providing the highest sensitivity of the study. Minimal amounts of biological material are sufficient to diagnose the type of infectious agent, assess its quantity and localization. In the decoding of the blood test for chlamydia and mycoplasma, you will see indicators of Chlamydia trachomatis DNA, Chlamydia pneumonia DNA, Mycoplasma trachomatis DNA, Mycoplasma pneumonia DNA. As you understand, despite the achievements in the field of molecular biology and medicine, the results of the analyses may not adequately reflect the picture of what is happening. And situations in which the results of high-precision analyses for the same indicators differ significantly can confuse even a real professional. Thus, in the diagnosis of chlamydia and mycoplasmosis, the results of blood tests performed using ELISA and PCR techniques may give different results. This can happen for the following reasons. After recovery, IgG antibodies may persist in the blood serum for a long time. Found in the transcript of a blood test for chlamydia or mycoplasmosis, they can be mistakenly interpreted as signs of infection in the body. At the same time, a PCR blood test aimed at detecting the DNA of actually missing pathogens will give a negative answer. In addition, ELISA and PCR methods respond differently to chronic infectious diseases. Exhausted by the fight against infection, the body can reduce the production of antibodies to pathogens, and an ELISA analysis will show the absence of infection. But the PCR method will definitely identify intracellular parasites. In addition, the informative value of the ELISA method may decrease during the incubation period, when the body does not have time to give its response. Thus, one should not overestimate the importance of blood tests for chlamydia and other intracellular parasites and consider them a diagnostic panacea. They do not replace other research methods, but together with them they allow you to find the right solution.

CONCLUSION. Despite the relatively short history of studying the role of "atypical" pathogens in the pathology of the respiratory tract, enough data has accumulated to assert that C. pneumoniae and M. pneumoniae are important etiopathogenetic factors in the development and progression of the most common respiratory diseases. This should be remembered by the practitioner when he decides on the choice of an antibacterial drug or is faced with a clinical situation where traditional treatment (for example, BA or COPD) does not bring the expected results.

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