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COMPLICATIONS OF PULMONARY TUBERCULOSIS

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Abstract

Pulmonary tuberculosis remains a significant public health problem worldwide, despite advances in diagnostics and treatment. This article reviews the main complications resulting from tuberculosis, such as pleurisy, pulmonary hemorrhage, and the development of bronchiectasis. In particular, the importance of timely detection and a comprehensive approach to the treatment of these complications, which can significantly worsen the quality of life of patients and lead to death, is emphasized (Kuznetsov, 2021; Petrova et al., 2022). Risk factors and recommendations for the prevention of complications in high-risk groups are also discussed. Understanding the relationship between tuberculosis and its complications is key to improving the effectiveness of medical care and improving prognosis for patients.

Keywords: Pulmonary tuberculosis, complications, pleurisy, bronchiectasis, diagnostics.

Introduction

Pulmonary tuberculosis remains one of the most important health and social problems in the world. According to the World Health Organization (WHO), more than 10 million new cases of tuberculosis were registered in 2020, and about 1.5 million people died from this disease (WHO, 2021). Despite advances in diagnosis and treatment, complications of pulmonary tuberculosis can significantly worsen the quality of life of patients and complicate the recovery process.

Main complications

1. Pleurisy

Pleurisy is one of the most common complications of pulmonary tuberculosis and can manifest as exudative (with fluid accumulation in the pleural cavity) or dry. Changes in the pleura occur as a result of inflammation caused by tuberculosis infection, leading to chest pain, shortness of breath, and difficulty breathing. According to research, up to 30% of patients with pulmonary tuberculosis may develop pleurisy (Mayorova, 2019).

2. Bronchiectasis

Chronic changes in the bronchi can lead to the development of bronchiectasis. This condition is characterized by abnormal expansions of the bronchial tree, resulting from constant inflammation and damage to the bronchi. Bronchiectasis is associated with chronic cough, purulent sputum production, and an increased susceptibility to lung infections. Studies show that up to 50% of patients with advanced tuberculosis may encounter this complication (Sidorenko, 2020).

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3. Lung abscess

As a result of lung tissue necrosis, an abscess may form, which is a cavity filled with pus. An abscess requires active treatment, often with antibiotics and, in some cases, surgery. Symptoms of a lung abscess include severe chest pain, fever, cough with purulent sputum, and general intoxication of the body. According to clinical observations, lung abscesses occur in 10-15% of patients with active tuberculosis (Kuznetsova, 2018).

4. Systemic complications

Tuberculosis can cause not only local complications in the lungs, but also affect other organs. For example, tuberculous meningitis can develop in infants and the elderly, manifesting itself with neurological symptoms (Orlov, 2019). Tuberculosis can also lead to osteomyelitis (inflammation of bone tissue), peritonitis (inflammation of the abdominal cavity), renal tuberculosis, and even tuberculous endocarditis, which indicates the importance of a comprehensive examination of all patients diagnosed with tuberculosis.

Prevention of complications

To reduce the risk of complications in pulmonary tuberculosis, early diagnosis and adequate treatment are important. It is important to not only diagnose tuberculosis itself, but also regularly monitor the condition of patients throughout the course of therapy. According to the Ministry of Health of the Russian Federation, the use of modern anti-tuberculosis drugs in combination with patient monitoring can significantly reduce the likelihood of complications (Ministry of Health of the Russian Federation, 2021).

In addition, patient education about the disease process and the importance of adherence to treatment is necessary. Educational programs can help raise awareness of tuberculosis and warn of potential complications.

Conclusion

Complications of pulmonary tuberculosis remain a significant problem in clinical practice. Careful monitoring of patients, highly qualified treatment and prevention are key aspects in the fight against this disease. Effective prevention, timely diagnosis and adequate treatment can significantly improve the prognosis and quality of life of patients. Description of symptoms associated with complications and their early recognition play an important role in the success of therapy.

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