# PROBLEMS OF EARLY DIAGNOSTICS OF TUBERCULOSIS SPONDILITIS

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In many countries of the world over the past decade there has been an increase in the incidence of extrapulmonary tuberculosis associated with the HIV epidemic, multiple pathogen resistance, low living standards, and insufficient funding for tuberculosis programs [1,2]. Tuberculous spondylitis accounts for about 40-50% of cases of osteoarticular tuberculosis; common and complicated forms are often found, leading to disability of patients. In most patients, a spinal cord lesion with a tuberculous process occurs as a result of hematogenous dissemination, and in a later period, with endogenous reactivation of old tuberculous foci. Tuberculous spondylitis is diagnosed in 40-50% of cases of specific processes and is a granulomatous necrotic lesion of bone tissue and belongs to the group of specific primary chronic osteomyelitis.

The primary focus is formed in the myeloid bone marrow with the development of granulomas. There is a destruction of the spongy structure of the vertebra and closure plates with subsequent deformation and the development of complications. When the process moves to the neighboring vertebra after deformation of the intervertebral disc, the clinical picture often changes and resembles the symptoms of hematogenous osteomyelitis of the spine. Diagnosis of tuberculous spondylitis is difficult due to the non-specificity of clinical manifestations and often latent course or subclinical manifestations.

The urgency of the problem of tuberculous spondylitis is not so much in the high epidemiological danger to others as in pulmonary tuberculosis, but in permanent disability in late diagnosis with significant economic consequences [3]. A comprehensive assessment of complaints, medical history, objective status data, laboratory parameters of the basic method of radiation diagnostics (spinal radiography) makes it possible to assess the need for highly sensitive methods - spiral computed tomography (SCT) and magnetic resonance imaging (MRI) to clarify the changes identified on the radiograph. An increase in the efficiency of diagnosis and differentiation with nonspecific spondylitis and hematogenous osteomyelitis of the spine is achieved.

Doctors of primary health care when treating patients with prolonged pain in the lumbar or thoracic spine usually suggest a preliminary diagnosis of osteochondrosis. However, treatment may be ineffective. Particular attention in these patients when collecting an anamnesis should be given to contacts with patients with tuberculosis, to find out if they had previously been observed by a TB doctor [4,5]. It is necessary to analyze the results of previous x-ray examinations of the chest organs and conduct, if appropriate, repeatedly in two projections. In patients with possible tuberculous spondylitis, an increase in rigidity of the back muscles and the appearance of radicular pain are noteworthy. Later, with the appearance of a leaky abscess, the configuration of the back changes, spinal disorders occur.

It must be remembered that in patients without HIV infection, tuberculous spondylitis progresses gradually, often the diagnosis is made more often after 6 or more months after the onset of the first symptoms of the disease. In patients with HIV infection in the AIDS stage, against the background of generalization and dissemination of tuberculosis, spinal lesions become acute.

Imaging methods include radiography, SCT, MRI, and radioisotope imaging. The first of them is considered basic, fairly accurate, more affordable and relatively inexpensive, they usually start using radiation research methods. If necessary, clarify any identified changes in the spine and surrounding tissues using high-tech methods. After comparing the data of the methods of radiation diagnostics, an integral result is

obtained for evaluating all the revealed changes after they are detailed for a more accurate diagnosis [6]. SCT clearly visualizes even small foci of destruction in the vertebral bodies and their relationship with paravertebral tissues and the spinal canal, sequestration and abscesses are determined.

MRI does not visualize the structure of the bone tissue of the vertebrae as SCT, determining only infiltrative changes of a non-specific nature [7]. All structures of the spinal cord and all formations in the spinal canal, paravertebral abscesses are very clearly visualized. To clarify the nature of infectious spondylitis and abscesses, contrasting is performed. Important for tuberculous spondylitis is the spread of destruction from the spongy structure of the vertebra to the neighboring, the destruction of the locking plates.

## Conclusions

1. When differentiating with non-specific infectious spondylitis, it is taken into account that in most patients with tuberculous spondylitis, the disease manifests itself as chronic specific osteomyelitis.
2. In patients with HIV infection, against the background of generalization of tuberculosis, spondylitis can acquire an acute course with severe pain, fever, intoxication.
3. . At the stage of limited destructive lesion of the vertebral body without the involvement of locking plates and contact destruction of the adjacent vertebra, tuberculous spondylitis is rarely diagnosed (in young people more often).
4. In elderly patients with limited vertebral destruction, the clinical symptom process involves differentiation with osteochondrosis and osteoarthrosis until the progression of pain, myotonic and neurological disorders. In young patients, tuberculous spondylitis at the stage of limited destruction is established earlier due to the limited tolerance of severe physical exertion and the absence of osteochondrosis at this age.
5. It is necessary to determine the possible presence of a primary tuberculosis complex, exudative pleurisy, a specific process of a different localization.

## References


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