Diagnosis of vertebral mineral metabolism disorders in patients with drug-resistant pulmonary tuberculosis using computed tomography data

M.I. Lynnyk[1], V.I. Ignatieva[1], G.L. Gumeniuk[2], V.A. Svyatnenko[3], N.M. Bobok[4]

1. SI "National Scientific Center of Phthisiatry, Pulmonology and Allergology named after F.G. Yanovsky of the NAMS of Ukraine", Kyiv, Ukraine
2. Shupyk National Healthcare University of Ukraine, Kyiv, Ukraine
3. National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Kyiv, Ukraine
4. Instytutum AG, Zug, Switzerland

Conflict of interest: none

BACKGROUND. In patients with widespread pulmonary tuberculosis, the disease with pronounced symptoms of intoxication may be due to the disruption of protein metabolism and the function of the hepatobiliary system, and thus, a decrease in the level of amino acids in the liver, protein, substituted for ammonia, indicators of ALT, AST, thymol test. Changing biochemical test results to confirm the presence of hepatotoxic, cholestatic or mixed side effects of antimycobacterial drugs. Their influx into the development of osteoporosis without surviving, behind the blame of lonely work twenty years ago. In connection

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with this, diagnosis and treatment of the dynamics of disruption of mineral metabolism of bone tissue in patients with drug-resistant tuberculosis based on computed tomography (CT) data of the chest organs are relevant.
OBJECTIVE. To monitor the dynamics of mineral thickness of bone tissue of the spine and the development of osteoporosis in patients with drug-resistant tuberculosis according to CT of the chest organs and demonstrate on clinical butts.
MATERIALS AND METHODS. Densitometry was carried out using the K-Pacs program. The results were compared with the results of diagnosing osteoporosis based on the standardized 3D QCT program. 38 patients with drug-resistant pulmonary tuberculosis were analyzed in the dynamics of CT of the chest organs, in which monitoring of the structure (Th12, L1-L2) of the ridges was carried out for the lowest values of densitometric indicators (average, minimum and maximum bone mineral density) on axial CT sections. Control examination of the bone mineral density was carried out 1 time after the cob.
RESULTS. With post-operative release, 39.5 % of patients had a decrease in densitometric indicators of the vertebrae (osteopenia and osteoporosis). During the control fasting after 1 year of the cob, 92.1 % of patients experienced a decrease in densitometric readings, which indicates a decrease in spine metabolism.
CONCLUSIONS. The use of CT data of the chest organs for diagnosing disorders of mineral metabolism in bone tissue of the spine in patients with pulmonary tuberculosis is an accessible and informative method.

KEY WORDS: mineral metabolism, aging, osteoporosis, osteopenia, drug-resistant tuberculosis, densitometry, computed tomography.