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TUBERCULOSIS AND ITS COURSE IN PATIENTS WITH HEPATITIS B

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Annotation: *In this study, the problem of hepatitis «B» in patients with drug resistant tuberculosis of the lungs is currently of great practical importance. The incidence of hepatitis «B» and tuberculosis continues to increase, and the epidemiological danger of this age group remains high. The factor that determines the peculiar course of the process is a decrease in the functional activity of the immune system.*

Keywords: *tuberculosis, virus, liver, lungs, mycobacterium.*

Relevance. Tuberculosis is an infectious disease that most often affects the lungs and is caused by a certain type of bacteria. It spreads through the air when infected people cough, sneeze or expectorate. Tuberculosis is a social disease. Koch's wand does not distinguish between social status and infects the poor and the rich with equal effectiveness.

Tuberculosis is preventable and curable. It is estimated that about a quarter of the world's population is infected with tuberculosis bacteria. The probability that infected people will eventually develop symptoms of tuberculosis and develop the disease is approximately 5-10%. People infected with tuberculosis bacteria, but (as yet) not sick with tuberculosis, cannot transmit it. Tuberculosis is usually treated with antibiotics and, in the absence of treatment, can lead to death. \In some countries, the Calmette-Guerin bacillus vaccine (BCG) is administered to infants or young children to prevent tuberculosis. The vaccine provides prevention of tuberculosis in difficult, but not in the lungs. Tuberculosis remains an urgent public health problem in the country, despite the fact that the incidence of this infection has been decreasing annually over the past decade. The liver is an important organ that makes up the immune system. With hepatitis "B" due to cytolysis of liver cells, its functions weaken, all this leads to serious disorders in the immune system. With the combined course of hepatitis "B" and pulmonary tuberculosis, serious changes occur in the mucous membrane of the respiratory tract, the number of pulmonary alveoli decreases, the vital volume of the lungs decreases. The growing prevalence of drug-resistant forms of tuberculosis around the world forces a new look at the study of the liver. Currently, the effectiveness of chemotherapy is not only not increasing, but tends to decrease. One of the leading reasons is the spread of drug-resistant Mycobacterium tuberculosis. This fact forces to prescribe from 3 to 9 chemotherapy drugs daily at the same time and to carry out treatment for a long time – 6-8 months. This creates a high

drug load on the patient, and most of all it is experienced by the liver, carrying out the metabolism of tuberculostatics and pathogenetic agents. The incidence of liver and hepatobiliary system lesions, according to various authors, ranges from 5.0% to 72.8%. Anti-tuberculosis treatment in this category of patients is largely hampered by poor tolerability of anti-tuberculosis drugs, especially in the presence of liver lesions with hepatitis "B". In this aspect, early detection and treatment of liver lesions is relevant. Literature data and our experience show that the prognosis in patients with drug-resistant pulmonary tuberculosis with concomitant pathology of the hepatobiliary system is unfavorable, and the possibilities of chemotherapy are limited. That is why the problem of timely diagnosis of liver lesions in patients with drug-resistant pulmonary tuberculosis remains of practical importance.

The purpose of our study: was to study the state of the hepatobiliary system of patients with drug-resistant pulmonary tuberculosis.

Materials and methods of research: In the Khorezm regional tuberculosis dispensary, 263 patients with pulmonary tuberculosis were subjected to a comprehensive examination. Among these patients, 163 patients were diagnosed with a drug-resistant form of pulmonary tuberculosis, and 100 patients had a drug–sensitive form of pulmonary tuberculosis. Patients with drug-resistant form of pulmonary tuberculosis were aged from 18 to 67 years. There were 107 men (65.6±3.7%), 56 women (34.4±3.7%). In 114 (69.9±3.5%) patients, fibrous-cavernous pulmonary tuberculosis was diagnosed, in 37 (22.7±3.2%) – infiltrative, in 12 (7.4±2.0%) disseminated pulmonary tuberculosis. In all patients, the resistance of mycobacterium tuberculosis to anti–tuberculosis drugs was revealed, including secondary resistance in 132 patients, primary resistance in 31 patients. Patients with drug-sensitive form of pulmonary tuberculosis were aged from 19 to 88 years. There were 66 men (66.0±4.7%), 34 women (34.0±4.7%). In patients with a drug-resistant form of pulmonary tuberculosis, the fibrous-cavernous form was detected 2.3 times more often (69,9±3,5%; 30,0±4,5% respectively). On the contrary, among these groups of patients, the infiltrative form of pulmonary tuberculosis was detected 2.7 times less often (22,7±3,2%; 62,0±23,6% respectively).

Clinical and echographic studies of the liver and gallbladder allowed 89 (54.6±3.8%) patients with drug-resistant pulmonary tuberculosis to detect liver pathology, 51 (31.3±3.6%) – gallbladder pathology. A combination of liver and gallbladder pathology was revealed in 33 (20.2±3.1%) patients with drug-resistant pulmonary tuberculosis. Pathology of the hepatobiliary system was not detected in 32 (19.6±3.1%) patients. These studies in patients with drug-sensitive form of pulmonary tuberculosis allowed 25 (25.0± 4.3%) patients to detect liver pathology and 6 (6.0± 2.3%) – pathology of the gallbladder. In 2 (2.0±1.4%) patients with a drug-sensitive form of pulmonary tuberculosis, a combination of pathology of the hepatobiliary system and gallbladder was revealed. Pathology of the hepatobiliary system was not detected in 44 (44.0 ± 4.9%) patients.

The main symptoms characteristic of liver pathology were expressed in 44 patients with a stable form of tuberculosis. Thus, asthenovegetative syndrome was noted in 25 patients, dull pain in the liver – in 14, dyspeptic disorders – in 18, liver enlargement – in 33, enlarged spleen – in 17, vascular asterisks on the skin of the abdomen – in 8, "liver palms" – in 24, jaundice of the skin – in 7, skin itching – in 12 patients. These symptoms are less pronounced in people with a sensitive form of pulmonary tuberculosis. Thus, asthenovegeative syndrome was noted only in 5, dull pain in the liver – in 3, dyspeptic disorders – in 6, liver enlargement – in 21, enlarged spleen – in 1, vascular asterisks on the skin of the abdomen – in 1, "liver palms" – in 6, jaundice of the skin – in 1, skin itching – in 3 patients.

The pathology of the hepatobiliary system was diagnosed on the basis of clinical and laboratory studies, including echography on an INTERSCAN device (Germany) operating in real time with sensors of 3.5 and 5.0 MHz.

When performing echography of the hepatobiliary system, the size, contours and shape of the edges of the liver, its elasticity and mobility, sound conductivity and echostructure of the parenchyma, the pattern of the intrarenal vascular network, gallbladder, its contours, wall thickness and the presence of stones were determined. Statistical processing of research results was carried out on an IBM compatible computer using a software package for statistical calculations "Microsoft Excel".

Results and discussions: Previously unrecognized liver diseases were diagnosed using clinical laboratory and echographic studies of the hepatobiliary system. When studying the comparative frequency of detection of pathology of the hepatobiliary system in patients with drug-resistant form and drug-sensitive form of pulmonary tuberculosis, it was found that pathological changes in the hepatobiliary system are detected more often in patients with drug-resistant form of pulmonary tuberculosis. Thus, liver pathology in the form of hepatitis B in patients with drug-resistant form of pulmonary tuberculosis is 2.1 times more common, pathology of the gallbladder is 5.2 times more common than in patients with drug-sensitive form of pulmonary tuberculosis (54.6% and 25.0%; 31.3% and 6.0%, respectively, $P<0.001$; $P<0.01$).

The combination of liver and gallbladder pathology was detected 10 times more often in patients with a drug-resistant form than in those with a drug-sensitive form of pulmonary tuberculosis (20.2% and 2.0%, respectively, $P<0.001$). Patients without pathology of the hepatobiliary system were detected 2.2 times less frequently among patients with a stable form of pulmonary tuberculosis than among those with a sensitive form of pulmonary tuberculosis (19.6% and 44.0%, respectively, $P<0.001$).

Conclusions: In patients with drug-resistant form of pulmonary tuberculosis, liver pathology in the form of hepatitis "B" by 2.2 times, gallbladder pathology by 5.2 times were detected more often than in patients with drug-sensitive form of pulmonary tuberculosis.

Complex clinical and echographic studies of the liver and gallbladder allowed 89 (54.6±3.8%) patients to detect liver pathology hepatitis "B" and 51 (31.3±3.6%) – pathology of the gallbladder. Echography of the hepatobiliary system expands the possibilities of early diagnosis of this pathology in patients with drug-resistant pulmonary tuberculosis. In chronic hepatitis and cirrhosis of the liver, liver echography allows you to obtain additional criteria for the disease (dilation of the portal vein, enlargement of the spleen, detection of foci of high echogenicity) with an accuracy of up to 100%.

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