THE USE OF ERYTHROCYTE SEDIMENTATION METHOD FOR DIAGNOSING OF INTOLERANCE TO ANTITUBERCULOSIS DRUGS IN PATIENTS WITH PULMONARY TUBERCULOSIS

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Abstract. *The purpose* of the study was to research the effectiveness of diagnosing of hypersensitivity to antituberculosis drugs by using the erythrocytes sedimentation method in patients with pulmonary tuberculosis. *Materials and methods.* Clinical and laboratory examination of 39 patients with newly established pulmonary tuberculosis (TB), mean age (28.5 ± 1.9) years, was performed. Depending on the clinical manifestations of hypersensitivity to antituberculosis drugs (ATD), patients with TB were divided into 2 groups. The first group included 15 patients aged (27.9 ± 2.5) years, with the presence of clinical manifestations of hypersensitivity to ATD, the second group included 24 patients aged (29.1 ± 1.4) years, without clinical signs of hypersensitivity. The control group included 18 volunteers aged (32.5 ± 2.2) years without signs of somatic, infectious and allergic pathology (blood donors. For specific laboratory diagnostics of patient's hypersensitivity to ATD, we used the evaluation of erythrocyte sedimentation reaction (ESR)with using of patient's venous blood mixed with 3.8 % sodium citrate solution, with the addition of first-line ATD — rifampicin, isoniazid, and ethambutol at the final concentration of 1.0 mg/ml. *Results*. The results of the conducted researches showed acceleration of ESR without drugs in the first 1–3 hours *in vitro* reaction (optimally — in 1 hour) in patients with TB and with clinical manifestations of hypersensitivity to ATD, which testifies to the relation of ESR to the state of hypersensitivity to ATD. Patients with TB and clinical manifestations of hypersensitivity had the most pronounced late reactions *in vitro* (after 3 and 24 hours) in the ESR test with ATD. The ESR test for ATD allows to determine the increased sensitivity to isoniazid and ethambutol among the most probable factors of drug hypersensitivity in patients with TB during treatment according to the developed parameters, since the severity, frequency and level of response to these drugs in patients with hypersensitivity was significantly higher. *Conclusions*. Obtained data confirm the efficiency of using the ESR to diagnose drug hypersensitivity reactions in patients with TB, and the development and implementation of software to optimize the work with the analysis of the results which were obtained during diagnostics made it possible to improve the efficiency of the doctor's work.

Key words: diagnostics of drug intolerance, antituberculosis drugs, tuberculosis, hypersensitivity, erythrocyte sedimentation method.

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