

THE RATE OF OFLOXACIN AND AMINOGLYCOSIDE-RESISTANT STRAINS OF MBT IN PATIENTS WITH MDR TUBERCULOSIS

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Abstract

Aim: to examine the rate and profile of drug resistance to tuberculosis (TB) drugs in patients with multidrug-resistant (MDR) TB depending on case of disease and to determine the rate of resistance to 2nd line anti-tuberculosis drugs — ofloxacin and aminoglycosides.

Materials and methods. 430 patients with MDR TB treated in SO "National Institute of phthysiology and Pulmonology named by F.G. Yanovsky NAMS of Ukraine " from 2007 to 2013 were examined. Drug susceptibility test to 1st line anti-TB drugs was performed on the liquid culture medium using automatic microbiological analyzer. In order to test 2nd line medications both liquid and solid media were used. All cases with extensive drug-resistance were excluded from the study.

Results. The level of resistance to any combination in patients with MDR TB was high: streptomycin (S) — 89,3%; ethionamide (Et) — 51,4 %; ethambutol (E) — 43,5%; pyrazinamide (Z) — 34,6 %; kanamycin (Km) — 28,1 % ($p < 0,05$, except E and Z, Z and Km). Resistance to fluoroquinolones (Ofloxacin), capreomycin (Cm) and PAS was less frequent. The incidence and profile of drug resistance didn't significantly depend on the cases, use of 2nd line therapy and duration of previous treatment.

Conclusions. In patients with new cases of MDR TB (excluding cases with extensive tuberculosis resistance) resistance to fluoroquinolones was revealed in 13,7 %, and to aminoglycosides — in 28,1 % of patients. The level of resistance to 1st and 2nd line medications did not depend on cases and duration of previous treatment. Exclusionary were only the cases of long-term (2 years and more) fluoroquinolones and aminoglycosides use.

Key words: multidrug-resistant tuberculosis, drug resistance, fluoroquinolones and aminoglycosides.

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