



## THE EFFECT OF THE USE OF LINEZOLID IN DRUG-RESISTANT TYPES OF TUBERCULOSIS

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**Introduction.** Linezolid (lzd) is a synthetic antibiotic used to treat severe types of tuberculosis caused by gram-positive bacteria that are resistant to antibacterial drugs.

The latest international guidelines recommend the use of linezolid in the treatment of patients with multiple and extensive drug-resistant tuberculosis (XDR/MDR-TB), but there is insufficient evidence to say how well it acts in patients treated with it, which dose is the best and how safe it is.

**Purpose.** To increase the effectiveness of treatment and improve the quality of life of patients with tuberculosis (XDR/MDR-TB), which is resistant to extensive drugs, with the use of linezolid, a reserve series drug in the treatment of patients with tuberculosis (XDR / MDR-TB).

**Materials and methods.** The study and its evidence were conducted at the "Phthisiatrics and Pulmonology center of Samarkand region" during 2021 - 2022, in the therapeutic departments of XDR/MDR-TB. Due to the presence of high resistance indicators of mycobacteria to antibacterial drugs 1 and 2, molecular genetic and bacteriological testing methods have been performed on all patients. The treatment was based on WHO protocol guidelines using the XPERT MTB RIF/ Ultra, Hain Test, and the 2nd line anti-tuberculosis drug scheme based on the 1st and 2nd line drug sensitivity (TLCh) results.

The patients being treated were divided into two groups, and the data from the clinical trial was analyzed. The first group consisted of 105 patients, taking a combination of drugs containing linezolid from the first day of treatment. As a result, 103 (98%) patients received sputum analysis conversion from the 4th month of treatment. Symptoms of toxic hepatitis in 28 (26.7%) patients from 3-4 weeks of treatment: decreased appetite, nausea, vomiting symptoms were observed. When we examined the blood laboratory, there was an increase in Alt, Ast and bilirubin.

And in the second group of the test, 43 patients took part, who were hastened with additional diseases. Of these, 8 (19.5%) have diabetic polyneuropathy (mainly diabetic angio-neuropathies). These patients had Lzd added to ABD drugs from the second month onwards. 33 (76.7%) patients were diagnosed with different levels of anemia: 9 (27.3%) with Grade I, and 24 (72.7%) with Grade II and Grade III. These patients were given anti-anemic treatment measures on the recommendation of a hematologist. Since 2 (4.7%) patients had severe levels of myopia, treatment was continued with the combination of drugs from the 4th month of Lzd (in which the patient was also given treatment measures with the recommendation of an ophthalmologist and neuropathologist).

**Conclusions.** The main results considered, it is possible to make conclusions: - the effectiveness of the treatment was much higher in the first group of patients, with a higher rate of loss of tuberculosis rods from sputum ( i.e. 98 -93.3% of patients) in the fourth month of the study. In the results of the study of long-term Lzd, patients treated with linezolid in the first clinical group showed a high risk of reduced red blood cells, nausea, vomiting and nerve damage. - In the II-test group, bone marrow suppression is caused to develop more than a ratio to the I-test group than: taking Lzd over a long period of time; to varying degrees of polyneuropathy and anemia until treatment in these patients. - In order for us to say with confidence how effective and safe linezolid is in the disease of antibacterial drug-resistant tuberculosis, high-quality research is definitely required.