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**Title:** Prevalence of aminoglycoside resistance among different MDR tuberculosis cases in Ukraine

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**Body:** Aminoglycoside resistance in patients with MDR tuberculosis complicate the treatment because adequate second-line regimens are difficult to design. Aim: to study the prevalence of aminoglycoside resistance among different MDR tuberculosis cases for right drug providing and prognosis treatment results. The prevalence of aminoglycoside resistance among different MDR TB cases was study in 527 patients, who were treated in Institute during 2009-2012 years. Drug susceptibility test to I and II line TB drugs was performed on liquid media in national reference laboratory with external quality control from Supranational laboratory (Riga, Latvia). Results. The aminoglycoside resistance excluding XDR cases was revealed in 103 (25,8%) of 400 patients with MDR: in 14 (18,2 %) patients of new cases of MDR (77 patients), in 56 (27,3 %) patients with patients with treatment failure of MDR course (205 patients), in 26 (31,0 %) patients of relapses cases of MDR (84 patients), in 7 (20,6 %) patients of treatment default cases of MDR (34 patients). The XDR was revealed in 127 (24,1 %) patients of 527 patients. The Km/Cm-resistance was revealed in 3,3 % cases of MDR and in 46,5 % cases of XDR. Conclusions. Our investigation demonstrates that the prevalence of aminoglycosid-resistance is very high and equally among different MDR cases. Km-resistance without fluoroquinolones resistance was revealed in 25,8 % cases of MDR. Km/Cm-resistance was revealed in 3,3 % cases of MDR and in 46,5 % cases of XDR.