

INCIDENCE OF SUPER MDR TB STRAINS IN MDR TB IS THERE ANY SUPER MDR TB IN IRAN?

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Introduction: MDR tuberculosis bacilli are Mycobacterium defined as strains resistant to isoniazid and rifampicin, Patients infected with these strains should be treated with second- line regimens (aminoglycosides, para aminosalicilic acid, cycloserin, etionamid, capromycin and quinolones). Now, resistance to second _ line regimens in these strains are seen. Super MDR-TB are defined as strains resistant to both first and second line regimens (10 to 11 drugs).

Material and Methods: the susceptibility test was performed on 113 culture positive MDR-TB cases by using proportional method (resistance to isoniazid, rifampicin, ethambutol and pirazinamid). Briefly, bacterial suspensions were inoculated in L.J and 7H10 culture media with and without drugs. Primarily antibiogram were done using 3 drugs. The concentrations of antibiotics in tubes containing drugs were as fallowes (caperomycin in 10, 20 and 40 µg/ml, Kanamycin in 5, 20 and 30 µg/ml and ethionamid in 5, 20 and 40 µg/ml). The colonies were counted after 28 and 42 days of incubation. 29 strains from all 113 MDR-TB were resistant to the 3 mentioned drugs. An additional antibiogram was done on these 29 strains using 3 different drugs. The concentration of drugs in each tube were as fallowing (cycloserin in 10, 20, 30 and 40 µg/ml, para aminosalisic acid in 0/25, 0/5, 1, 2. 5 and 10 µg/ml, ciprofloxacin in 2 and 12/5 µg/ml). The colonies were counted after 28 and 42 days of incubation.

Results: After the antibiogram results, from 29 strains that were resistant to the first three drugs, 2 strains were resistant to 11 drugs and one strain resistant to 10 drugs, and finely 18 strains have a underlying risk for super MDR.

Conclusion: Identification of three strains as super MDR-TB and 18 strains that have underlying risk for super MDR are considered as high risk factors for the community.