

MDR Tuberculosis Outbreak among Iranian Population

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Background & Objectives: Iran has a high incidence of tuberculosis (TB) including drug resistant cases. Inappropriate use of anti-TB drugs is risk factor for further development of multidrug resistant (MDR)-TB. We carried out an investigation to anti-tuberculosis drug in Iran, aim to prepare and trace MDR cases and choose better strategy to counter MDR tuberculosis. Patients with MDR-TB are treated with anti-tuberculosis regimens and also arranged by spoligotyping methods.

Methods: In this study, 102 tuberculosis patients were assessed using microscopic evaluation, culture and antibiogram include INH, RIF, SM, ETM and PIZ.

Results: 58.6% INH resistant, 42.6% for RIF, 15.8% for SM, 28% for ETM and 33.33% were resistant to PIZ. other part of research belong to spoligotyping clustering that separated specimen to Haarlem (30%), CAS (28%), T family (14%), Beijing (11%), MANU2 (8%) and LAM (3%) that are analyzed simultaneously with antibiogram result. Overall, being resistant to first line drug mentioned above showed: 27% resistant for Haarlem, 34% for CAS, 41% for T, 54% for Beijing, 74% for MANU2 and 26% were resistant to LAM. Our result showed that MANU2 (8%) is considerably more than average rate in spoligobank (0.04%) before, beside high rate of resistance for Beijing and specially MANU2 that were unexpected.

Conclusion: This result show needs for pay attention to antibiotic resistance that led to MDR and XDR resistant tuberculosis. On the other hand, MANU2 as a high potential epidemiologic cluster of *M.tuberculosis* need to be more investigated.

Keywords: Tuberculosis; MRD; Spoligotyping