

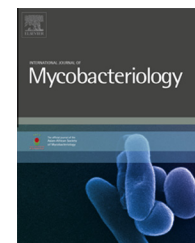
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Pest rodents as the essential elements of *Mycobacterium bovis* controlling programs

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ABSTRACT

Introduction: As a rule in any Bovine tuberculosis (BTB) control program, recognition of infection source is of great importance. Hence in this study, isolation and evaluation of Mycobacterial genomic patterns obtained from rodents of infected farms by RFLP method was conducted.

Material and method: Fifteen mice submitted from infected cattle farms with BTB that were collected in four provinces of IRAN were used in this study. Culture of Mycobacterium and RFLP-PGRS and RFLP-DR analysis of bovine isolates from the same areas were performed in the usual manner. Following the detection of different patterns between mice and cattle isolates, identification by PCR of IS6110 and RV0577, RD typing and sequencing of 16SrRNA and rpoB was conducted.

Result: Three isolates were obtained out of the 15 mice samples cultured from 2 out of the 4 separate provinces. RFLP analysis with PGRS and DR probes identified 2 different patterns from 5 cattle isolates and 1 single pattern from 2 mice isolates located at Ahwaz province, and 2 different patterns from 9 bovine isolates and 1 pattern from 1 mouse isolates located at West Azerbaijan were identified.

Two mice isolates from Ahwaz province were negative at the above PCRs and sequencing of 16SrRNA and rpoB revealed that these isolates are *Mycobacterium kansasii*. Another mouse identified as belonging to the *Mycobacterium tuberculosis* complex by PCRs and RD typing revealed that this isolate must be *Mycobacterium microti*.

Discussion: This study was unable to track tangible evidence of tuberculosis transmission by mice. Hence to prove this hypothesis, further studies are advised. However, it was found that mice are potentially a reservoir of zoonotic pathogens, and therefore its importance in this regard must be considered as an effective element of any controlling program.

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