Abstract:

[The abstract should be a concise summary of your research paper. It should be written in one paragraph and should not exceed 100 to 250 words. Here is a possible format you can use:]

RESEARCH POINT TITLE

Full Name Of The Researcher
Affiliation
Researcher's Email

Background: [3-5 sentences] ***Provide some context for your research. Explain why this topic is important and what gap in the literature*** ***you are trying to address. State the objectives of your research. What did you hope to accomplish with your study? What research questions did you try to answer?***
Methods: [3-5 sentences] ***Describe the methods you used to conduct your research. This should include information on the*** ***participants, materials, and procedures. Be specific and concise.***

Occurrence of disputed rpoB mutations among Mycobacterium tuberculosis isolates phenotypically susceptible to rifampicin in a country with a low incidence of multidrug-resistant tuberculosis

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Background : Accurate drug susceptibility testing (DST) of Mycobacterium tuberculosis in clinical specimens and culture isolates to first-line drugs is crucial for diagnosis and management of multidrug-resistant tuberculosis (MDR- TB). Resistance of M. tuberculosis to rifampicin is mainly due to mutations in hot-spot region of rpoB gene (HSR- rpoB). The prevalence of disputed (generally missed by rapid phenotypic DST methods) rpoB mutations, which mainly include L511P, D516Y, H526N, H526L, H526S, and L533P in HSR-rpoB and I572F in cluster II region of rpoB gene, is largely unknown. This study determined the occurrence of all disputed mutations in HSR-rpoB and at rpoB codon 572 in M. tuberculosis strains phenotypically susceptible to rifampicin in Kuwait.

Methods : A total of 242 M. tuberculosis isolates phenotypically susceptible to rifampicin were used. The DST against first-line drugs was performed by Mycobacteria growth indicator tube (MGIT) 960 system. Mutations in HSR-rpoB (and katG codon 315 and inhA-regulatory region for isoniazid resistance) were detected by GenoType MDBDRplus assay. The I572F mutation in cluster II region of rpoB was detected by developing a multiplex allele-specific (MAS)- PCR assay. Results were confirmed by PCR-sequencing of respective loci. Molecular detection of resistance for ethambutol and pyrazinamide and fingerprinting by spoligotyping were also performed for isolates with an rpoB mutation.