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GeneXpert: A new tool for the rapid detection of Rifampicin resistance in *Mycobacterium tuberculosis*

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To evaluate the diagnostic sensitivity and specificity of GeneXpert (MTB/RIF) assay for the detection of rifampicin (RIF) resistance in *Mycobacterium tuberculosis* (MTB) by comparing the results with conventional drug susceptibility testing (DST) as “Gold Standard”. A total of 2200 pulmonary and extra-pulmonary specimens were collected from TB suspects from 2012 to 2014. All specimens were processed for ZN staining, LJ culture according to WHO protocol GeneXpert (MTB/RIF) as per manufacturer instructions. All cases positive for MTB were further processed for DST for RIF. Out of 2200 Tb suspects, 840 (38.18%) cases were GeneXpert (MTB/RIF) positive for MTB. Among these 15.6% (134/840) cases showed RIF resistance. The sensitivity, specificity, PPV and NPV of GeneXpert for RIF resistance were found to be 98.3%, 99.1%, 94.7% and 99.4% respectively by comparing the results with DST. Our study revealed that GeneXpert (MTB/RIF) is an extremely helpful diagnostic tool for detection of RIF resistance in TB suspects with fairly high sensitivity and specificity along with 2 hours turnout time, which facilitates proper in time management and treatment among MDR-TB patients in developing countries.

Biography

Muhammad Saeed has completed his BSc in Medical Laboratory Technology from University of Health Sciences Lahore, Pakistan. He is working as a Medical Laboratory Technologist in Punjab Institute of Cardiology Lahore. He has published more than 9 research papers in well reputed Pakistani journal.

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