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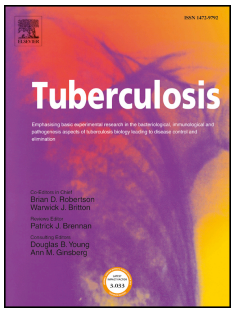

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A Novel Automatic Molecular test for Detection of Multidrug Resistance Tuberculosis in Sputum Specimen: A Case Control Study

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Abstract

MiniLab tuberculosis (ML TB) assay is a new automatic diagnostic tool for diagnosis of multidrug resistance tuberculosis (MDR-TB). This study was conducted with aims to know the performance of this assay. Sputum sample from 224 TB suspects was collected from tuberculosis suspects seeking medical care at Beijing Chest hospital. The sputum samples were directly used for smear and ML TB test. The left sputum sample was used to conduct Xpert MTB/RIF, Bactec MGIT culture and drug susceptibility test (DST). All discrepancies between the results from DST, molecular and phenotypic methods were confirmed by DNA Sequencing. The sensitivity and specificity of ML TB test for detecting MTBC from TB suspects were 95.1% and 88.9%, respectively. The sensitivity for smear negative TB suspects was 64.3%. For detection of RIF resistance, the sensitivity and specificity of ML TB test were 89.2% and 95.7%, respectively. For detection of INH resistance, the sensitivity and specificity of ML TB test were 78.3% and 98.1%, respectively. ML TB test showed similar performance to Xpert MTB/RIF for detection of MTBC