

Title: Impacts of Diagnosis Drug Resistant Tuberculosis by Xpert MTB/RIF Assay: A Systematic Review and Meta-Analysis

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In 2019, multi-drug resistant tuberculosis (MDR-TB) and rifampicin resistant tuberculosis (RR-TB) were found approximately 484,000 cases. Since 2010, Xpert was implemented as a rapid TB test, nowadays, the information of its impacts on treatment outcomes still limited. The purpose of the study was to compare time to diagnosis, to initiated treatment and to sputum culture conversion between using Xpert and conventional method for diagnosis of MDR/RR-TB. A systematic review and meta-analysis were conducted. Seven databases including Thai National Research Repository, Thai Library Integrated System, Medline, Scopus, ScienceDirect, Google Scholar, and Cochrane, which published between 2010 and 2017 were searched. Of 53 articles were reviewed, then 46 articles were excluded, there were not inclusion criteria. Seven articles were reviewed and assessed for bias. Four studies revealed that using Xpert had shorten the interval of time to diagnosis ranged from 34.3-91.5 days. Two studies revealed the shorten of time from sputum taken to initiated treatment ranged from 61-62 days. One study showed that the time from sputum taken and the time from initiated treatment to sputum culture conversion were shorten by Xpert for 134.5 days. Successful treatment was not significantly difference between 2 groups (RR=0.95, 95%CI 0.47-1.91), also unfavorable outcomes were not difference between 2 groups (RR= 0.81, 95%CI 0.44-1.50). Xpert might be considered to use for screening of drug resistant tuberculosis in high prevalence areas. It might decrease tuberculosis transmission in communities. It shortened time to diagnosis, to initiated treatment, and to sputum culture conversion.

Biography

Samorn Numpong studying at last year of doctor of philosophy program in tropical medicine (international program) at Mahidol university, Thailand. She has published more than 6 articles of Thai journal citation index. She has experience about medical field such as midicines and public health more than 20 years. She interested in researches an epidemiology and public health.

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