Prevalence of Mycobacterium tuberculosis LAM family in the worldwide population: A systematic review and meta-analysis

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ABSTRACT

Background: Tuberculosis (TB) disease caused by Mycobacterium tuberculosis (MTB) is still an important cause of morbidity and mortality. Latin American and Mediterranean (LAM) is one of a family of phylogenetic MTB, and its name is derived from the geographical area that has been isolated. The objective of this study is to determine the prevalence of MTB LAM family worldwide by meta-analysis and a systematic review.

Methods: Data sources for this study are comprised of 70 original articles (2001–2013) that were published in the literature in several databases, including PubMed, Science Direct, Google Scholar, Biological abstracts, ISI Web of Knowledge and IranMedex. Data were analyzed using meta-analysis (Meta R, Version 2.13 package [p < 0.10], CI: 95%).

Results: The highest and lowest occurrence rate of the LAM family in MTB was in Europe and Asia. Totally, the prevalence of the LAM family in Europe, Africa, America and Asia was 32.10%, 29.20%, 14.4% and 0.2%, respectively.

Conclusions: This study shows that MTB LAM family is prevalent in European countries. LAM sub-lineage is a major focus of studies carried out in different countries. Proper technique for prevention of transmission of MTB is necessary.

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