

Prevalence of Latent Tuberculosis in Contacts of Pulmonary Tuberculosis patients: A Systematic Review and Meta-Analysis

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Abstract

Introduction: Tuberculosis is still a leading cause of morbidity and mortality in the world, especially the low and middle income countries. While a lot is being done on the programmatic level, the burden of the disease is still underestimated owing to problems in diagnostics and infrastructure. **Objective:** The objective of this study was to estimate the prevalence of Latent Tuberculosis infections in the pediatric household contacts of patients of pulmonary tuberculosis in India. **Methods:** We searched electronic databases PubMed, EMBASE and Ovid for relevant articles. Search of grey literature and unpublished data was also done. The protocol of the study was registered in the PROSPERO. The quality of included studies was assessed using the Hoy et, al. checklist. The data extraction from relevant studies and subsequent data synthesis and analysis was done. The calculation of the pooled prevalence of LTBI, and the construction of galbraith plot for heterogeneity was done using STATA software. **Result:** The searches yielded 600 studies out of which 19 were included in the review. The pooled prevalence of LTBI among household contacts was 39.27[26.05-52.49]. On subgroup analysis, the prevalence of LTBI from studies with only pediatric contacts included was 26.73[17.70-35.76]. There was significant heterogeneity amongst the various studies with overall $I^2=99.7\%$. A Galbraith Plot was constructed which also shows significant heterogeneity among the different studies. All studies had a low risk of bias with a score of 3 or less, except one, which had a moderate risk of bias with a total score of 4.

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