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Editorial

# A Systematic Review and Meta-Analysis HIV in Ethiopian Tuberculosis Patients and Intestinal Parasites

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#### Abstract

It is unclear how common intestinal parasites are among Ethiopian tuberculosis patients. To ascertain the combined national prevalence of intestinal parasites and its correlation with HIV among patients with tuberculosis in Ethiopia, a comprehensive review and meta-analysis was conducted. Cross-references were manually searched in addition to the automated searches of PubMed, Google Scholar, EMBASE, and the HINARI site of the World Health Organization for original papers. A common data extraction check list was used to extract the data. The pooled prevalence of intestinal parasites and the odds ratio of the association were estimated using a random-effects model. The statistical heterogeneity between studies was measured using the I2 statistic. To assess for publication bias, funnel plot asymmetry and Egger regression tests were applied. STATA version 14 conducted the analysis for among the most common illnesses in persons in impoverished nations are parasitic and TB infections. I Worldwide, the overlap between TB and parasitic illness morbidity was shown with high and reliable numbers. In countries with high TB burdens, intestinal parasite infection (IPI), which is widespread, affects more than half of those with latent or active TB infections.

Keywords: Ethiopia, HIV/AIDS, Intestinal parasite, Tuberculosis

## INTRODUCTION

One-third of tb patients in Africa have an ipi8, which adds to the high rate of pulmonary therapeutic failure. It is clear that pulmonary tb and parasite infections have been linked as risk factors for one another and are highly comorbid in underdeveloped nations (Adhikari M et al., 2011). The host's immune system may be severely suppressed by infection, which could also make the patient more resistant to antibacterial treatment and worsen their prognosis (Arentz M et al., 2012). The illness additionally, a parasitic illness infection can change the immune system's defence against mycobacterium tb (Babu S et al., 2009). This suggests that concurrent helminth infections reduce the immune system's ability to fight off mycobacterial infections (Banfield S et al., 2012). Additionally, having intestinal parasites reduces the potency of the tb vaccine and raises the risk of developing active tb infections after receiving it (Bates M et al., 2012). At the conclusion of the treatment, parasite infection also showed more severe radiological pulmonary illness in the number of affected lung zones (Bhargava A et al., 2013). Particularly in individuals with newly diagnosed tb, concurrent intestinal helminth infection changes the patient's immune profile, which may encourage persistent mycobacterium the infection and a longer clinical course of the illness (Bhaskaram P 2002).

#### DISCUSSION

Patients with tuberculosis are frequently infected with parasitic worms in underdeveloped nations, which raise their risk of developing tb (Black GF et al., 2002). Complications a latent tb infection progresses to an active tb disease and raises the risk of tb lung damage when parasitic infection is present (Chintu C et al., 1993). Significant rates of tb transmission to healthy people are caused by high tb progression, a delay in clinical response, and continued

infectiousness (Co DO et al., 2006). There are some things that make tb patients more susceptible to parasite infection. Previous research has cited a number of characteristics, including eosinophil count, habitation, and habit of washing produce. On the one hand, tb is linked to the existence of illnesses that damage the immune system, like hiv/aids. Hiv/aids, on the other hand, are thought to be a risk factor for ipis. Ethiopia is thought to be the source of the high prevalence of tb/hiv comorbidity at the moment. Infections caused by parasites pose a serious threat to the health of those with impaired immune systems. When tb patients without immunodeficiency are compared, HIV infection causes the highest incidence of ipis, while hiv-positive tb patients had a much lower prevalence of ipis, according to another study. In conclusion, low socioeconomic status and immune status can be used to explain the high prevalence of tb and ipi comorbidity. 28 policy makers and programme planners are urged by literature about the prevalence of intestinal parasites and risk factors among these vulnerable populations to pay attention and take the necessary precautions. The prevalence of parasitosis co-morbidities with tb in Ethiopia is not understood. The scant evidence is contradictory and inconclusive. Therefore, highlighting the overall degree of comorbidity may raise concerns for policy.

### CONCLUSION

Tb and parasite infection comorbidity must be successfully treated, as well as a national tb control and preventive strategy must be successfully implemented, which calls for policy makers and ministries of health to provide interventional guidelines or bidirectional frameworks. In Ethiopia, patients with tb were subjected to a systematic review and meta-analysis to ascertain the pooled national prevalence of ipi and its relationship to HIV. The following inclusion criteria were met by all articles for the study: they had to be written in English, be full-text articles on observational studies (case-control or cross-sectional), have been carried out in Ethiopia from 2004 to 2018, published in peer-reviewed journals, or be available at university repositories, and have used valid and reliable diagnostic criteria to diagnose intestinal parasites. The final analysis omitted studies that did not statistically disclose specific outcomes for intestinal parasites.

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