

Incidence of active TB disease among PLHIV/AIDS who took isoniazid preventive therapy in public health facilities of Addis Ababa, Ethiopia

Gebremariam Birhanu and Teferi Gedif
Addis Ababa, Ethiopia

Introduction: HIV pandemic has exacerbated TB especially in Sub-Saharan African countries where HIV prevalence is high. WHO and UNAIDS recommended the use of IPT among PLHIV to reduce the burden of TB. It has been implemented in Ethiopia since 2006. However, the effectiveness of taking IPT has not been assessed. Therefore this study tried to assess the effectiveness of IPT in averting occurrence of TB among PLHIV.

Objective: To assess the incidence of active TB among PLHIV who took and didn't take IPT.

Methodology: Retrospective cohort study design was employed using secondary data from public health institutions of Addis Ababa. Poisson regression and survival analysis were used for data analysis.

Results: From 2524 PLHIV who were followed for 4106 Person-Year, 277 incident TB cases were found. Tuberculosis incidence rate was 0.21/100P-Y, 0.86/100P-Y & 7.18/100P-Y among IPT completers, in-completers and non-exposed patients respectively. The adjusted incidence rate ratio among IPT completers vs. non-exposed was 0.037 (95% CI, 0.016-0.072; P=0.000), adjusted hazard ratio was 0.044(95% CI, 0.021-0.094; P=0.000). Sex, residence place, occupation, baseline WHO stage of HIV/AIDS and CD4 counts were determinant factors. Patients who took HAART with IPT had significant reduction of TB incidence and hazard by 93.7% and 92.7% than those who took HAART alone. There was significant survival difference among groups ($\chi^2 = 248.56$; P=0.000). IPT significantly reduced occurrence of active TB for 3 years; aIRR=0.909 (95% CI, 0.0416-1.742; P=0.043).

Conclusion: Among IPT completers, TB incidence and hazard was reduced by 96.3% by 95.8% respectively. HAART with IPT have significantly reduced TB incidence than HAART alone. Protective effect of IPT was lost after 3 years. Hence its implementation should be strengthened.

gebremariam.birhanu@aau.edu.et