

Sero-prevalence of Syphilis, Hepatitis B virus and associated factors among adult people receiving antiretroviral therapy at Batu town in Ethiopia

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Treponema pallidum, *Hepatitis B Viruses* (HBV) and *Human Immuno Virus* (HIV) shares common transmission mechanisms and their co-infection increase the risk of HIV transmission, HIV treatment failure and treatment associated adverse among people receiving Anti-Retroviral Therapy (ART). No documented data on the extent of Treponema pallidum, Hepatitis B Viruses and their associated risk factors of infections among people receiving ART at Batu City of Ethiopia.

To assess prevalence of Syphilis, HBV and associated factors among adults attending ART service at Batu City.

Four hundred two patients on ART were randomly selected from health care facility in Batu town from June 1 to August 30, 2021. Data was collected using structured questionnaire. Five ml whole blood was collected and plasma was separated for detecting Treponema pallidum and HBV by an enzyme-linked immune sorbent assay. Data were entered into Epi-Info-7 then exported to SPSS version 21 for cleaning and analysis. Descriptive statistics was used to explore participants' characteristics. The association between the predictors and outcome variables was assessed using logistic regression model.

The prevalence of Syphilis and HBV among people receiving ART was 11.2% and 16% respectively. Multiple sexual partners (AOR=7.38, 95% CI: 2.85,19.1), non-condom uses (AOR=5.83, 95% CI: 1.04,32.54), were significantly associated with of Syphilis and HBV among people receiving ART while drug injection is also the predictor of HBV infection (AOR=7.59, 95% CI: 2.72,21.19).

The prevalent sero-positivity of Syphilis and HBV among people receiving ART in Batu city highlights the necessity of regular screening for these infections and giving awareness on associated prevention.

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