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Active case finding for pulmonary tuberculosis and detection of drug resistance among HIVinfected patients in Gondar, Ethiopia

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Background: Patients co-infected with HIV and TB often lacks the classic symptoms of pulmonary TB thus making TB diagnosis difficult. Current practice is to wait for symptomatic persons to present for TB screening, which can result in a delayed diagnosis of TB and consequently continued transmission in the community. The global HIV epidemic may be contributing to increase in MDR-TB prevalence.

Objective: To determine the prevalence of undiagnosed pulmonary TB cases through active case finding including MDR-TB, among HIV-infected patients.

Methods: A cross sectional study was conducted from February 2012-November 2012 among HIV-infected patients aged ≥18years attending the ART clinic of the UOG hospital. A pre-tested questionnaire was used to collect socio-demographic and clinical data. Sputum samples were collected for direct AFB microscopy and Mycobacteria culture. A PCR based RD9 deletion typing and genus typing was performed from all culture positive AFB isolates and drug-susceptibility testing was done for first line anti-TB drugs keeping SOP's. Statistical analysis was performed using SPSS Version 20.0 software packages.

Results: Our results showed that out of 250 HIV-infected participants, screened for TB through active case finding, 9(3.6%) were smear +ve /culture +ve and 6(2.4%) were smear -ve /culture +ve. RD9 typing showed that out of 15 isolates 10(66.6%) were *M. tuberculosis* species, 1(6.7%) belonged to *Mycobacterium genus* and four isolates were non Mycobacteria. Therefore, a total of 11 undiagnosed pulmonary TB infections were identified. All isolates were sensitive to RIF, INH and EMB. Mono-drug resistance was identified only for STM in one newly diagnosed TB patient and MDR-TB was not observed.

Conclusion and Recommendation: The prevalence of undiagnosed PTB infection among HIV-infected patients in Gondar was 4.4%. Active screening of known HIV-infected individuals for TB, with at least one TB symptom should be considered.

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