ABSTRACT FOR ICASA 2013 TRACK B4: HIV AND CO-INFECTIONS

PREVALENCE AND RISK FACTORS FOR TUBERCULOSIS OCCURING AFTER INITIATION OF HIGHLY ACTIVE ANTIRETROVIRAL THERAPY IN A NIGERIAN TERTIARY HOSPITAL

Michael O. Iroezindu,[1,2,3] Eugenia O. Ofondu,[2] Godwin C. Mbata,[2] Brian Van Wyk,[3] Harry Hausler,[3,4]

1. Infectious Diseases Unit, Department of Medicine, University of Nigeria Teaching Hospital, Enugu, Nigeria
2. Department of Medicine, Federal Medical Centre, Owerri, Imo State, Nigeria
3. School of Public Health, University of the Western Cape, Cape Town, South Africa
4. TB/HIV Care Association, Cape Town, South Africa

Corresponding/Presenting author:

Michael O. Iroezindu
Infectious Diseases Unit, Department of Medicine,

University of Nigeria Teaching Hospital, Enugu, Nigeria

mikezindu@yahoo.com; +234-7031376345,

ABSTRACT

Background: Tuberculosis (TB) remains the commonest opportunistic infection in people living with human immunodeficiency virus (HIV) in sub-Saharan Africa even in the era of highly active antiretroviral therapy (HAART). We determined the prevalence and risk factors for TB among HIV-infected patients receiving HAART in an African setting with high TB burden.

Methods: A descriptive and analytical cross-sectional study was conducted among adult HIV-infected patients receiving HAART for a minimum of 12 weeks at the Federal Medical Centre, Owerri, Nigeria. HAART was defined as the use of at least 3 antiretroviral drugs from at least 2 different classes. Patients whose TB diagnosis ante-dated the commencement of HAART were excluded. Data was collected using a structured questionnaire. Data on pre-HAART socio-demographic, clinical and laboratory characteristics were obtained. Post-HAART data were collected through history, physical examination and relevant laboratory investigations including 3 sputum samples for acid fast bacilli (AFB) and chest X-ray. Standard TB screening and diagnostic algorithms were used. Data analysis was carried out using the Epi Info version 3.5.1 statistical software (CDC, Atlanta, Georgia, USA). Logistic regression analysis was used to determine the independent risk factors for the occurrence of TB using parameters that had a p-value of <0.25 on univariate analysis. Statistical significance was set at p<0.05.

Results: There were 339 participants made up of 223 (65.8%) females and 116 (34.2%) males. Their mean age was 41.1 ± 10.0 years. Men were significantly older with a mean age of 46.8 ± 9.2 years compared to 38.1 ± 9.2 years in women, p<0.0001. The median duration of HAART was 35 (20-50) months. There was no significant difference between men and women in the median duration of HAART, 36 (22-54) months and 34 (20-48) months respectively, p=0.11. Out of 339 patients, 26 (7.7%) were diagnosed to have TB. The prevalence of TB was higher in men (11.2%) than in women (5.8%) but the difference was not statistically significant (p=0.08). Of the 26 patients, 11 (42.3%) had only pulmonary TB while the others had disseminated TB 9 (34.6%), pleural TB 3 (11.5%), TB lymphadenitis 2 (7.7%) and abdominal TB 1(3.8%). Only 9 (45%) of the 20 patients with pulmonary involvement had smear positive disease. The independent risk factors for occurrence of TB were

past history of TB (Adjusted Odds ratio [AOR]= 5.3; 95% CI 1.4-20.2), duration of HIV diagnosis <3 years (AOR= 0.1; 95% CI 0.01-0.7), HAART duration <36 months (AOR= 8.1, 95% CI 1.1-57.7), HAART non-adherence (AOR= 168.2; 95% CI 19.9-1422.6), baseline CD4 cell count <200 cells/µl (AOR= 31.3; 95% CI 2.8-351.6) and current haemoglobin <10 g/dl (AOR =14.2; 95% CI 2.4-84.3). Male gender was not an independent risk factor for TB (AOR= 1.70, 95% CI 0.3-10.3).

Conclusions and Recommendations: The prevalence of TB in our patients receiving HAART is low. Past history of TB, shorter HAART duration, HAART non-adherence, severe immunosuppression at HAART initiation and on-going anaemia were the important contributors to TB. Efforts to address these risk factors should be intensified both before and after HAART commencement.

Key words: HAART, HIV, Nigeria, Risk factors, Tuberculosis