

Effect of Zidovudine on Hematological and Virologic Parameters among Female Sex Workers Receiving Antiretroviral Therapy (ART) in North-Western Nigeria

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Abstract : Haemoglobin (HB) indicates anaemia level and by extension may reflect the nutritional level and perhaps the immunity of an individual. Some antiretroviral drugs like zidovudine are known to cause anaemia in People living with HIV/AIDS (PLWHA). A cross-sectional study using demographic data and blood specimen from 218 female commercial sex workers attending antiretroviral therapy (ART) clinics was conducted between December 2009 and July 2011 to assess the effect of zidovudine on haematologic and RNA viral load of female sex workers receiving antiretroviral treatment in north-western Nigeria. Anaemia is a common and serious complication of both HIV infection and its treatment. In the setting of HIV infection, anaemia has been associated with decreased quality of life, functional status, and survival. Antiretroviral therapy, particularly the highly active antiretroviral therapy (HAART), has been associated with a decrease in the incidence and severity of anaemia in HIV-infected patients who have received a HAART regimen for at least 1 year. In this study, result has shown that out of 218 patients, 26 with haemoglobin count between 5.1-10 g/dl were observed to have the highest viral load count of 300,000-350,000 copies/ml. It was also observed that most patients (190) with HB of 10.1-15.0 g/dl had viral load count of 200,000-250,000 copies/ml. An inverse relationship therefore exists, i.e. the lower the haemoglobin level, the higher the viral load count, even though the test statistics did not show any significance between the two ($P=0.206$). This shows that multivariate logistic regression analysis demonstrated that anaemia was associated with a CD4+ cell count below $50/\mu\text{L}$ in female sex workers with a viral load above 100,000 copies/mL who use zidovudine. Severe anaemia was less prevalent in this study population than in historical comparators; however, mild to moderate anaemia rates remain high. The study, therefore, recommends that hematological and virologic parameters be monitored closely in patients receiving first line ART regimen.

Keywords : anaemia, female sex worker, haemoglobin, Zidovudine

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