

Impact of HIV-associated immunosuppression on PfCRT gene of patients attending University of Medical Sciences Teaching Hospital Complex, Akure, Nigeria

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Abstract

This study evaluated the prevalence of malaria and Plasmodium falciparum Chloroquine Resistant Transporter gene (PfCRT) in HIV patients attending the University of Medical Sciences Teaching Hospital Complex, Akure. This study was carried out between April and June 2019. Three hundred and seventeen (317) patients attending the antiretroviral clinic (ART) were involved, out of which 89 (28.08%) were males and 228 (71.92%) were females. HIV test was done using the Unigold® HIV test kit, malaria test was done using thick and thin blood smear, CD4 test was done using the Partec® CD4 counter and Polymerase Chain reaction (PCR) was used to detect the presence of plasmodium falciparum mutant gene. The data obtained from this analysis was subjected to Pearson's Chi-square test. The overall result showed low prevalence of malaria (23.03%) in the sampled patients. Highest malaria prevalence (31.0%) was recorded in HIV-patients with CD4 count between 200-500 cells/ μ l of blood, with the males recording 24.7% malaria prevalence. The age group 20-29 years recorded the highest prevalence of 27.3%. A higher prevalence 91.1% of PfCRT gene in HIV-positive and (40.0%) in HIV-negative patients was recorded with 100% prevalence in patients with CD4 count \leq 200. This shows that the low prevalence of malaria recorded in this study could be credited to good health-seeking attitude of HIV patients and the upscale of HIV care and treatment centres. The high prevalence of PfCRT gene shows that treatment of malaria with chloroquine is still being practised despite the availability of Artemisinin-based Combination Therapy (ACTs) as the recommended regimen for malaria treatment

Biography:

Dr (Mrs) I.A Simon-Oke completed her Ph.D at the age of 38 years from the University of Ado Ekiti now (Ekiti State University, Ado Ekiti). She is a Senior Lecturer in the Department of Biology, Federal University of Technology, Akure, Nigeria. She has published more than 30 papers reputable journals and has been serving as a reviewer for some reputable journals.

Speaker Publications:

1. "Parasitic contamination of water sources in Akure, Ondo State, Nigeria"
2. "Prevalence of urinary tract infections and risk factors among pregnant women attending antenatal clinics in government primary health-care centers in Akure, Nigeria"
3. "Adulticidal and Repellent Activities of Some Botanical Oils against Malaria Mosquito: Anopheles gambiae (Diptera: Culicidae)"
4. "Status of Toxic Metal Pollution of Soil in and around Araromi Metal Scrap Dumpsite, Akure, Ondo State, Nigeria"
5. "Prevalence of Entamoeba histolytica among primary school children in Akure, Ondo State, Nigeria"

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