

*International Conference on***PHARMACEUTICAL AND BIOMEDICAL ENGINEERING***October 16-17, 2017 Osaka, Japan***Impact of HIV and hepatitis B virus co-infection on selected hematological markers of the patients in Umuahia, Abia State, Nigeria****Emmanuel Ifeanyi Obeagu¹, Ifeoma B Enweani², Godswill C Okara³ and Getrude Uzoma Obeagu⁴**¹Michael Okpara University of Agriculture, Nigeria²Nnamdi Azikiwe University, Nigeria³Dr. Hassan's Hospital & Diagnostic Centre, Nigeria⁴Ebonyi State University, Nigeria

Statement of the Problem: There is increasing cases of HIV infection in Nigeria which suppress immunity of those infected and increasing co-infection; of which HBV is one of the co-infection that has drastic impact on the hematological parameters.

Aim: The study was done to determine impact of HIV/HBV co-infection on selected hematological markers of the patients.

Methodology: The study was done in Umuahia, Abia State, Nigeria. 186 subjects were recruited for the study. 80 subjects were HIV positive patients and 26 subjects were HIV/HBV co-infected patients. 30 subjects were HBV subjects, 50 subjects were the control. Two milliliters (2.5 ml) of venous blood was collected following aseptic techniques from each subject into EDTA anti-coagulated containers for the CD4 count and full blood count. Two different HIV screening kits were used (determine and Unigold test kits) for the detection of HIV-seropositivity following serial algorithm. One step Hepatitis B Surface Antigen (HBsAg) test strip method. The CD4+T cells were determined using flowcytometry method.

Findings: The result showed significant increase ($P < 0.05$) in all the parameters studied when compared among the HIV mono-infected patients and HIV-HBV co-infected patients. There was significant decrease ($P < 0.05$) in CD4+T cells of the HIV-HBV co-infected subjects compared to HIV mono-infected subjects. The result equally showed significant difference ($P < 0.05$) in platelets, WBC, absolute neutrophil, PCV and hemoglobin and no significant difference ($P > 0.05$) in absolute lymphocyte of HBV subjects compared to the controls. The study also showed significant difference ($P < 0.05$) in platelets, absolute lymphocytes, absolute neutrophil and no significant difference ($P > 0.05$) in WBC, PCV and hemoglobin. This shows that HBV leads to thrombocytopenia which can cause a lot of bleeding disorders. The viral infection did not affect WBC, PCV and hemoglobin in HIV subjects compared to HBV subjects.

Conclusion: The viral infection affects the leucocytes and platelets more than the erythrocytes line. It shows that HBV infection to HIV positive patients is dangerous and should be prevented. HIV positive persons should be counseled to avoid illicit and unprotected sexual intercourse and other ways that could expose them to the transmission of HBV because of the adverse effects on their health status.

Recent Publications

1. Obeagu E I, Ibeh Nancy C, Nwobodo H A, Ochei K C and Iwegbulam, C P (2017) Haematological indices of malaria patients coinfecting with HIV in Umuahia. *International Journal of Current Research in Medical Sciences*; 3(5): 100-104.

2. Obeagu E I, Amilo G I, Okara G C, Ochei K C and Unaeze B C (2017) Evaluation of Impact of HIV on Haematological Indices of Pregnant Women in Umuahia. *Merit Research Journal of Medicine and Medical Sciences*; 5(5): 214-216.

Biography

Emmanuel Ifeanyi Obeagu has received her Bachelor of Science degree in Biotechnology at Michael Okpara University of Agriculture and also Masters. He has passion for research into health issues to improve lives and advance knowledge and diagnosis of diseases.

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