

Infection Prevention 2017: The effect of HIV/AIDS and malaria co-infection on clinical and haematological parameters - Ndabong Michael - University of Buea

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Some degree of communication has been established recently between HIV/AIDS and falciparum malaria co-infection in studies approved call at certain parts of Africa, although with conflicting results. Though, not much has been done in Cameroon. In instruction to investigate the interaction, a clinical and laboratory study was carried out in the urban town of Yaoundé the capital city of Cameroon on 480 subjects from March – September, 2015. Information on the information of practices and attitudes towards both infections was also obtained. Analysis of the questionnaire indicated that members generally had poor knowledge on HIV and malaria. The occurrence of malaria, HIV and co-infection was 78.8%, 11.7% and 7.9% correspondingly. The mean temperature of co-infected patients (37.5 ± 0.007) was higher associated with that of patients infected with HIV (36.7 ± 0.13). Co-infected patients were knowingly more anaemic ($t=2.275$, $p=0.026$) and had low red blood cell counts ($t=-2.681$, $p=0.001$) than those with mono-infections. The mean parasite thickness was higher in co-infected patients (1630.97 ± 231.02) when related with patients solely analysed with malaria (1217.44 ± 67.07) ($x^2=7.65$, $p=0.0251$). WBC total was lower in co-infected patients associated with patients infected with malaria or HIV only ($x^2=2.24$, $p=0.488$). The mean CD4 count in co-infected subjects (317.94 ± 45.00 cells/mm³) was lower than in those having HIV only (321.37 ± 24.63 cells/mm³), but this difference was not statistically significant ($t=-1.521$, $p=0.265$). The follow-up mean CD4 count (350.11 ± 30.34) in co-infected patients increased related with the initial count (31.6 ± 17.82) ($x^2=-1.613$, $p=0.069$). Therefore HIV and malaria co-infection within the study site was generally related with anaemia, high fever, and high parasite density, lower RBC and WBC count and reduced CD4 counts. Malaria and HIV are two important reasons of morbidity and mortality in Africa. Over two-thirds of individuals living with HIV/AIDS (PLWHA) are found in sub-Saharan, a neighbourhood during which malaria is endemic. HIV infection is the foremost cause of mortality amongst adults aged 15–59 years in the region although malaria and HIV infections are highly prevalent and remarkably overlapping in Sub-Saharan Africa, the extent and consequences of their interactions are still not completely understood platelet count, differential lymphocyte counts and CD4+ T cell counts in co-infected patients compared to patients with single infections of either type. In Cameroon, an estimated 610,000 people were living with HIV in 2009, with an adult prevalence of 5.3% while the annual adult malaria incidence was estimated at over a million. After providing written consent, participants were interviewed employing a standardized structured questionnaire.

Tropical countries pathophysiological, clinical and epidemiological interactions between HIV and pathogenic organisms especially malaria parasites constitute a priority of public health implication. Adaptable infections caused by viruses, parasites, bacteria, fungi and other pathogens remain as major causes of mortality among HIV patients. Blood samples were then collected for thick and thin smear microscopy also as a typical origin count. Another portion of blood was used for origin counts using the Hema Screen18 automated origin counter. Pearson correlation coefficients were also went to quantify the connection between malaria parasitemia and every of red blood corpuscle count, haemoglobin levels, white blood corpuscle counts, lymphocyte counts. Malaria parasitaemia was measured as parasites per microliter supported the measured white blood corpuscle counts. Furthermore, HIV successively facilitates the speed of malaria transmission which successively causes strong helper T cell activation and up-regulation of pro-inflammatory and cytokines production which create a perfect microenvironment for the range of HIV amongst CD4 cells for rapid HIV-1 repetition. Frequently have abnormal blood counts including anaemia, leucopenia and thrombocytopenia. Infection of HIV and malaria are among the 2 most vital global health problems of developing countries including Nigeria which was reported to cause quite 4 million deaths a year, with HIV infection increasing the risk of and severity of malaria infection and burdens the Hematological profiles previously evaluated in these studies were on specific and limited indices. Several studies have provided evidence that anaemia is that the commonest hematological abnormality in HIV and malaria co-infected patients. These patients were duly registered into the HIV care and treatment program within the hospital and had will fully consented by signing consent forms to participate within the study. We excluded pregnant HIV infected women and any HIV infected patient who has been on antimalarial some degree of communication has been established recently between HIV/AIDS and falciparum malaria co-infection in studies approved call at certain parts of Africa, although with conflicting results. Though, not much has been done in Cameroon. In instruction to investigate the interaction, a clinical and laboratory study was carried out in the urban town of Yaoundé the capital city of Cameroon on 480 subjects from March – September, 2015. Information on the information of practices and attitudes towards both infections was also obtained. Analysis of the questionnaire indicated that members generally had poor knowledge on HIV and malaria. The occurrence of malaria, HIV and co-infection was 78.8%, 11.7% and 7.9% correspondingly. The mean temperature of co-

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