OMICS Group Conferences
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International Conference on
Hematology & Blood Disorders
September 23-25, 2013 DoubleTree by Hilton Hotel Raleigh-Durham Airport at RTP, NC, USA

Increased T-cell activation and Th1 cytokine concentrations prior to the diagnosis of B-cell lymphoma in HIV infected patients

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Despite the use of combined antiretroviral therapy, HIV-infected individuals have a higher risk of developing B-cell lymphoma compared to the general population. We aim to explore whether lymphocyte activation, increase in Th1 response as well as markers of EBV reactivation, may precede lymphoma diagnosis. Thirteen cases and 26 controls matched on $CD4^+$ T-cell count and HIV plasma viral load were identified. Samples were collected 0 to 5 years prior to B-cell lymphoma diagnosis. Seven out of thirteen (54%) and 16/26 (61.5%) of cases and controls were receiving antiretroviral therapy at the time of sampling, respectively. $CD8^+$ T-cell activation and Th1 cytokine concentrations were measured before lymphoma onset, together with IgG antibodies directed against viral capsid antigen (VCA) and serum levels of EBV DNA. A higher level of $CD8^+$ T-cell activation was observed in patients developing lymphoma. Four out of seven Th1 cytokine serum concentrations were significantly higher in patients with lymphoma than in the control group: IL-2R, IL-12 p40/70, IFN-γ-inducible protein 10 (IP-10) and monokine induced by IFN-γ (MIG). Anti-VCA IgG level were significantly higher in cases than in controls. Four cases (30%) but no controls had detectable EBV DNA in serum. A higher level of T-cell activation, Th1 cytokine serum concentration and markers of EBV replication, preceded B-cell lymphoma diagnosis. This may suggest that viral antigen stimulation is associated with the genesis of lymphoma in HIV-infected patients.

Biography

David Eric Ouedraogo has completed his Ph.D. at the age of 30 years from Montpellier 1 University School of Medicine. He is a Researcher at the National Institute of Health Research. He has published several papers in reputed journals and serving as potential reviewer in many international journals.

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