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Chronic immune activation in HIV associated non hodgkin lymphoma and the effect of antiretroviral therapy

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It is evident that altered immune mechanisms play a critical role in the pathogenesis of Non Hodgkin lymphoma (NHL) [De Roos et al., 2012; Mellgren et al., 2012]. HIV infection is associated with a state of excessive T-cell activation [Cao et al., 2009], which has been associated with increased T-cell turnover and lymph node fibrosis [Haas et al., 2011]. The current study aimed to determine the serum levels of circulating B-cell activation markers, the expression of T-cell activation and regulatory markers in HIV positive NHL patients. The serum levels of circulating soluble sCD20, sCD23, sCD27, sCD30 and sCD44 cells were determined by enzyme linked immunosorbent assay (ELISA). Biomarkers of T-cell activation and regulation were determined by flow cytometry in 141 subjects that were divided into 5 groups: naive HIV+; cART treated HIV+; HIV negative NHL; HIV+ NHL and healthy controls. HIV+ NHL patients had significantly high serum levels of sCD20, sCD23, sCD30 and sCD44 as compared to NHL, while all 5 biomarkers including sCD27 were significantly elevated in HIV+ NHL when compared with cART treated HIV+ patients. HIV+NHL patients had higher CD8+CD38 and lower FoxP3 expression than NHL and cART treated HIV+ patients. B-cell activation is increased in HIV+NHL as evidenced by increased B-cell activation markers, and is associated with suppressed T-cell regulation and increased T-cell activation.

Biography

Brian Flepisi has completed his PhD in Pharnacology at the University of Stellenbosch. However, he is currently employed as a lecturer at the University of the Western Cape. His research interest is on HIV associated cancer.

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