



POSTER PRESENTATION

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# HTLV-1 associated bronchiectasis among Indigenous Australians is associated with higher HTLV-1 proviral loads: Results of a prospective case-control study

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Infection with HTLV-1 is associated with bronchiectasis in Indigenous Australians. Previous studies have not determined HTLV-1 proviral loads (pvl), which predict risk of other HTLV-1 associated inflammatory diseases, such as HTLV-1 associated myelopathy. Thirty-six Indigenous adults admitted to Alice Springs Hospital, June 2008 to December 2009, with radiologically confirmed bronchiectasis, but no other HTLV-1 related disease, were prospectively recruited and matched by age and sex to 36 controls of the same ethno-geographic origin. Case notes were reviewed from date of birth or first admission to date of recruitment. HTLV-1 subtype C pvl were determined at the Pasteur Institute, Paris. HTLV-1 infection was more common among cases (25/36; 69.4%) than their controls (15/36; 41.7%)( $p < 0.018$ ). Two cases were admitted in childhood with probable infective dermatitis and two with recurrent strongyloidiasis unresponsive to treatment with thiabendazole. In adulthood, cases (25/36; 69%) were more likely than controls (5/25; 20%) to have positive or borderline strongyloides serology ( $p < 0.001$ ). The mean HTLV-1 pvl ( $\pm$ SEM) was significantly higher for cases ( $0.83 \pm 0.21\%$  PBMC) than controls ( $0.12 \pm 0.05\%$  PBMC)( $p = 0.016$ ) and was nearly 17 fold-higher compared to controls in which bronchiectasis was excluded by HRCT ( $0.05 \pm 0.02\%$  PBMC;  $p = 0.006$ ). Twelve cases (33.3%) and 5 controls (13.9%) died during 3 years of follow-up ( $p < 0.052$ ). Cases died at a younger age (cases,  $49 \pm 15$ ; controls,  $60 \pm 13$ )( $p = 0.15$ ). In both groups HTLV-1 infected

patients were more likely to die: cases, 11/12 (92%); controls, 4/5 (80%). HTLV-1-associated bronchiectasis is associated with higher HTLV-1 pvl suggesting that this condition results from an HTLV-1 driven inflammatory process.

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