

THE EPIDEMIOLOGY AND CLINICAL MANIFESTATIONS OF THE HUMAN T CELL LEUKAEMIA VIRUS TYPE 1c IN REMOTE AUSTRALIAN ABORIGINAL COMMUNITIES.

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Background:

Although infection with the human T cell leukaemia virus type 1c (HTLV-1c) is endemic among Aboriginal people in central Australia, no public health response has been implemented. Insights into the epidemiology and clinical manifestations of HTLV-1c in remote Aboriginal communities were obtained from the first large-scale, community-based study.

Methods:

The study was developed with Aboriginal communities. Residents were invited to participate between August 2014 and June 2018. Blood samples were collected, HTLV-1 infection status was determined (positive HTLV-1 western blot or HTLV-1c PCR), and the number of HTLV-1c infected cells in peripheral blood (HTLV-1c proviral load, PVL) was measured. HTLV-1 associated diseases were determined using pre-specified clinical conditions documented in medical records. HTLV-1c PVL were compared between asymptomatic and symptomatic participants.

Results:

720 community residents participated (children <15 years, 142; adults, 578); HTLV-1 infection was confirmed for 218 participants. Prevalences for children and adults were 3.5% (5/142) and 36.8% (213/578), respectively. Thirty-four adults with HTLV-1 (15.9%), but no child, had an HTLV-1 associated disease. A wide range of HTLV-1c PVL were measured for both asymptomatic and symptomatic participants, but median HTLV-1c PVL was 1.34 log₁₀ higher for the symptomatic group. There was no difference in median HTLV-1c PVL between genders or age groups.

Conclusion:

The adult prevalence of HTLV-1 infection in central Australia is the highest reported worldwide. A public health response to reduce transmission among Aboriginal Australians is warranted in central Australia.

Disclosure of Interest Statement:

No conflicts of interest