RETROSPECTIVE STUDY OF HUMAN T-CELL LEUKAEMIA VIRUS TYPE 1 & ADULT T-CELL LEUKAEMIA/LYMPHOMA IN QUEENSLAND, AUSTRALIA

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Background:
Human T-cell Leukaemia Type-1 (HTLV-1) is a blood borne and sexually transmitted virus which causes Adult T-cell Leukaemia (ATL). ALT is associated with high morbidity and mortality. Recently 30-50% of some Indigenous communities in Central Australia tested positive for HTLV-1. We researched the HTLV-1 prevalence and ATL incidence in the state of Queensland, by retrospectively testing de-identified serum samples collected at health care services and haemodialysis units (2018-2019) for HTLV-1 antibodies through screening and Western Blot confirmation and by analysing pooled national cancer registry surveillance data reporting on ATL (2004-2015).

Results:
2/ 2000 HHS samples were confirmed HTLV-1 positive (0.1%, 95% CI 0.02%- 0.4%); both in older women; one Indigenous, one non-Indigenous. All haemodialysis samples were negative. All samples were HTLV-2 negative. 10/42 (24.8%) cases of ATL in Australia were from Queensland (CRI 0.025/100,000; 95%CI 0.011-0.045), most in adult men of non-Indigenous origin. 19 deaths due to ATL were recorded in Australia.

Conclusion:
Both Indigenous and non-Indigenous people may be infected with HTLV-1 and develop ATL in Queensland. Making HTLV-1 a notifiable disease will optimise its surveillance. Implementing tailored HTLV-1 transmission prevention strategies to avert further HTLV-1 infections and ATL cases and developing specific clinical care pathways for people living with HTLV-1 and ATL needs to become a public health priority.

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