



MEETING ABSTRACT

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Maternal proviral load and vertical transmission of Human T cell Lymphotropic Virus type 1 in Guinea-Bissau

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Background

The relative importance of routes of transmission of Human T cell Lymphotropic Virus type 1 (HTLV-1) in Guinea-Bissau is largely unknown; vertical transmission is thought to be important, but there are very few existing data. We aimed to examine factors associated with transmission in mothers and children in Guinea-Bissau, where HTLV-1 is endemic (prevalence of 5%).

Methods

A cross-sectional survey was performed among mothers and their children (aged <15 years) in a rural community in Guinea-Bissau. A questionnaire to identify risk factors for infection and a blood sample were obtained. HTLV-1 proviral load in peripheral blood was determined and PCR was performed to compare Long Terminal Repeat (LTR) sequences in mother-child pairs.

Results

Fourteen out of 55 children (25%) of 31 HTLV-1 infected mothers were infected versus none of 70 children of 30 uninfected mothers. The only factor significantly associated with HTLV-1 infection in the child was the proviral load of the mother; the risk of infection increased significantly with the log₁₀ proviral load in the mother's peripheral blood (OR 5.5, 95% CI 2.1-14.6, per quartile), adjusted for weaning age and maternal income. HTLV-1 sequences of the LTR region obtained

from mother-child pairs were identical within pairs but differed between the pairs.

Conclusions

Vertical transmission plays an important role in HTLV-1 transmission in this community in Guinea-Bissau. The risk of transmission increases with the mother's proviral load in the peripheral blood. Identical sequences in mother-child pairs give additional support to the maternal source of the children's infection.

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