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SOCIETY MEETING PAPER

Awareness of mother-to-child transmission of human T-cell lymphotropic virus (HTLV) type I through breastfeeding in a small group of HTLV-positive women in Maripasoula and Papaïchton, French Guiana☆

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Summary The aim of this study was to assess the awareness of human T-cell lymphotropic virus (HTLV) transmission, especially through breastfeeding, in a small group of 40 HTLV-seropositive women in French Guiana and to examine the public health policies in place to reduce transmission. The results show that the majority of HTLV-positive women were aware of having a blood virus, diagnosed antenatally, and were advised to avoid breastfeeding. This advice was followed in the majority of cases despite financial difficulty. Participants were largely unaware of other modes of transmission. Public awareness was low, leading to increased stigmatising of people with HTLV, more so than HIV. Health policies in place to reduce transmission of HTLV are focused on vertical transmission, with women being routinely tested antenatally and advised to avoid breastfeeding. There was no further advice routinely given on other modes of transmission. There was no routine follow-up of HTLV-positive women. Suggestions include public education programmes such as those that are in place for HIV, education of healthcare workers, and setting up a network for systematic follow-up and support of HTLV patients.

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1. Introduction

Human T-cell lymphotropic virus type I (HTLV-I) was the first human retrovirus associated with malignancy and is the aetiological agent for adult T-cell leukaemia/lymphoma (ATL), with 5% of the global prevalence of ATL due to HTLV-I infection (Mueller and Blattner, 1997), as well as HTLV-I-associated myelopathy (HAM) and tropical spastic paraparesis (TSP). Among infected patients, less than 5% develop ATL 20—40 years after infection (Aubry, 2002); less than 3% develop HAM/TSP. Seroepidemiological studies have shown that HTLV infection has a worldwide distribution, with 15—20 million people infected, but is endemic in some areas including southern Japan (15—30%), the Caribbean (3—6%), South America, Papua New Guinea and parts of Africa.

The main modes of transmission identified are vertical transmission from mother to child through prolonged breastfeeding, sexual intercourse and parenteral transmission (needle sharing and blood transfusion). The risk of developing TSP/HAM appears to be increased in sexual and blood-borne infection, whilst ATL is strongly linked to early infection during childhood (Plancoulaine et al., 1998). This study will focus on transmission from mother to child through breastfeeding, as vertical transmission is thought to play a key role in the maintenance of an endemic population.

2. Study area and methods

2.1. French Guiana, a highly HTLV-I endemic area in South America

French Guiana is an overseas department of France in north-eastern South America between Brazil and Suriname, with an estimated population of 157 000 (see Figure 1). The population is composed of a variety of ethnic groups, including Creoles (50%), Haitian immigrants (20%), Whites (10%) and Noir-Marrons (5.4%; descendants of escaped slaves from Surinamese plantations) (Kazanji and Gessain, 2003).

Maripasoula is an isolated village in the south-west of French Guiana on the Maroni River bordering Suriname. The estimated population is 4000, most of whom are of African descent (Noir-Marrons). Previous studies in Maripasoula (Plancoulaine et al., 1998) have shown an endemic population. Within the Noir-Marron population, the overall HTLV seroprevalence was 8%, with seroprevalence increasing with age in both sexes. Papaïchton is also a village on the Maroni River, north of Maripasoula, with an estimated 1500 inhabitants. Large epidemiological surveys conducted in these two villages showed an HTLV seroprevalence of 10.1%.

The French State is responsible for general public healthcare delivery in French Guiana. The population benefits from a universal health insurance plan that forms part of the social security system, with the state covering the cost of medical care for even the poorest sectors of the population.

2.2. Mother-to-child transmission of HTLV

Cessation of breastfeeding has been proven to reduce transmission of HTLV-I and has been highly effective in reducing the incidence of HTLV in Japan (Hino, 1990). Long-term breastfeeding has been associated with a higher risk of transmission, with studies estimating the median time of HTLV-I infection from mother to child through breastfeeding to be 11.9 months (Furnia et al., 1999). The risk of HTLV-I seropositivity in children was associated with an elevated maternal HTLV-I antibody titre, a high maternal HTLV-I proviral load and child's sex, with an increased frequency of infection in girls (Ureta-Vidal et al., 1999).

Figure 1 Map of French Guiana (reproduced, with permission, from www.worldatlas.com).

2.3. Data collection

Data were collected in January and February 2004 by means of a questionnaire and interviews with 40 HTLV-seropositive women under 55 years of age in Maripasoula and Papaïchton. Information was collected both by home visits and at the medical centres. The majority of these women had been previously identified by earlier studies (Gessain et al., 1984). An interpreter was needed to translate to Aluku, the local language, in 56% of the interviews. Additional information regarding existing policies on HTLV testing and breastfeeding advice was received from midwives in Maripasoula, Papaïchton and St Laurent du Maroni. Data from healthcare workers were collected by direct questioning regarding awareness of HTLV modes of transmission and prognosis.

3. Results

Of the 86 HTLV-positive women <55 years of age identified in the Maripasoula and Papaïchton areas, 19 had died or could not be traced and 27 had moved away from the area. Therefore, 40 women were interviewed, comprising 30 in Maripasoula and 10 in Papaïchton.