00573

RISK AND PROTECTOR FACTORS ASSOCIATED WITH HUMAN T-LYMPHOTROPIC VIRUS TYPE 1 (HTLV-1) MOTHER-CHILD TRANSMISSION IN BRAZIL.

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BACKGROUND

Maternal-child transmission of HTLV-1 (MCT) occurs mainly by breastfeeding, but it is unclear whether other factors, such as vaginal delivery, mother age, sex of the child, high mother viral load and the existence of infected siblings also have a role in MCT. The objective of this study was to determine the risk and protector factors for MCT, in a cohort of HTLV-1 patients followed for long time in São Paulo, Brazil.

METHODS

- Retrospective study focused on women and their offspring followed at the Infectious Diseases Institute "Emilio Ribas" The MCT was determined through the positive serology of the mother or siblings, and confirmed by Westblot and or Nested-PCR.
- Statistical analysis was performed on the software Graph Pad Prism 7.0 and the chi-square test was used for the comparison of categorical variables.

RESULTS

- 292 HTLV-1 positive mothers (average age 52.4 years-old) were studied so far. A total of 733 children were exposed to HTLV-1 during pregnancy and/or breastfeeding (Figure 1).
- Up to now, 366 (49.9%) of the offspring were tested, 85% (312/366) of them were negative for HTLV-1 and 15% (54/366) were HTLV-1 positive (Figure 1).
- Mother older than 30 years at parturiation (OR 4.0; 95% CI [1.9-8.0]; *p value* 0.003), female child (OR 2.6; 95% CI [1.5-4.8]; *p value* 0.008) and breastfeed for more than 6 months (OR 6.2; 95% CI [2.8-13.4]; *p value* 0.0001) were risk factors for MCT by HTLV-1 (Figure 2).

Risk Increased:

- **Mother age during gestation ≥**30 years;
- **Female child**;
- **Breastfeeding** ≥ 6 months.

Figure 1. Cohort HTLV-1-infected women and exposed offspring

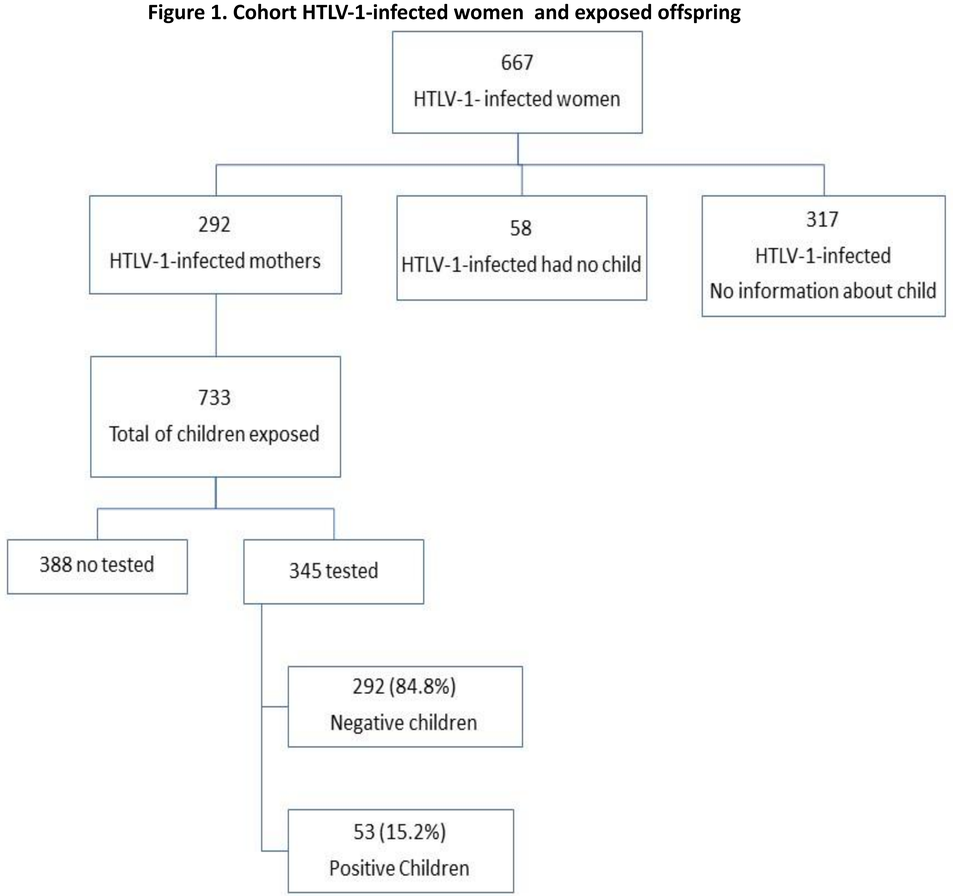
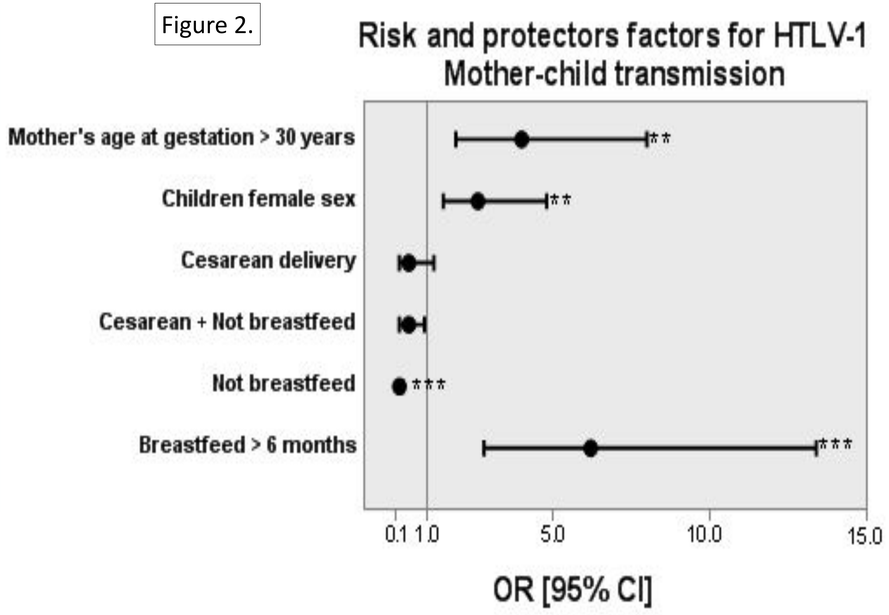


Figure 2.



- In contrast, cesarean delivery (OR 0.4; 95% CI [0.1-0.9]; p= 0.05) and not having been breastfeed (OR 0.1; 95% CI [0.06-0.2]; p= 0.0001) were protector factors for MCT (Figure 2).

CONCLUSIONS

- The HTLV-1 mother-to-child transmission rate was 15%.
- Mother older than 30 years at the parturiation increased the risk of HTLV-1 mother-child transmission by four fold.
- Female children had 2.6 times more risk than males and breastfeeding for more than 6 months increased the risk for MCT by 6.2 fold.
- Cesarean delivery was not a significantly protector factor.
- Not breastfeeding reduced the risk of MCT to one-tenth.
- These findings may help to implement management measures for pregnant women with HTLV-1 infection could decrease the burden of this virus in endemic areas.

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