



MEETING ABSTRACT

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Human leukocyte antigen (HLA) class I frequencies in human T-cell lymphotropic virus type 1 (HTLV-1)-infected patients from Salvador-Brazil

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Introduction

The development of human T- cell lymphotropic virus type 1 (HTLV-1)-associated myelopathy/tropical spastic paraparesis (HAM/TSP) may be related to genetic factors related to the presentation of viral antigens by human leukocyte antigen (HLA).

Aim

To determine the HLA class I genotype of HTLV-1-infected patients.

Methods

420 HTLV-1-infected patients (280 healthy carriers (HC) and 140 HAM/TSP) from the HTLV Reference Center in Salvador, Brazil were evaluated. HLA genotype was performed using automated DNA sequencers and analyzed using the software program Assign-SBT TM 3.2.

Results

The HLA types most frequently observed in all individuals combined were A*02 (26.1%), A*03 (10.5%); B*35 (13.1%), B*44 (10.4%), Cw*04 (21.9) and Cw* 07 (17.7%). The presence of HLA-A*02 reduced the odds of HAM-TSP (Odds Ratio: 0.4, $p < 0.0001$ and IC95%: 0.28-0.59). The frequency of homozygosity of HLA-A was 8%, 4% for HLA-B and 9% for HLA-C overall. Proviral load was significantly lower in HC among those heterozygous at all three HLA class I loci group relative to HC who were homozygous at one or more HLA class I loci group ($p = 0.029$). However, no difference in

homozygosity between proviral load in the HAM/TSP patients was observed ($p = 0.57$).

Conclusion

HLA-A*02 allele is more prevalent in the HC patients, which suggests a protective role of this allele against HAM/TSP. Furthermore, HC patients had a higher frequency of heterozygosity at all three HLA class than that in HAM/TSP patients.

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