RETROVIROLOGY

MEETING ABSTRACT Open Access

High HTLV-I proviral load in patients with HAM/TSP and ATLL but not with other disorders

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Background

HTLV-I proviral load (pVL) is proposed as a biomarker of disease progression. HTLV-I pVLs are higher in symptomatic compared to asymptomatic carriers. The aim of this study was to evaluate HTLV-I pVL in patients with HTLV-I associated diseases (HAM/TSP and ATLL) and other disorders (uveitis and pyoderma gangrenous–PG).

Methodology

HTLV-I pVL was evaluated in 62 subjects; 52 asymptomatic and 10 symptomatic (5 HAM/TSP, 2 ATLL, 2 uveitis and 1 PG). HTLV-I pVL in PBMCs was estimated by a quantitative real-time PCR assay with SYBR Green, where HTLV-I pol gene is amplified in parallel with albumin gene as a normalizer. The limit of detection of the assay was of 400 copies of HTLV-I/10^6 PBMCs (0.04%). Differences among groups where assessed by Mann-Whitney test.

Results

Symptomatic subjects (median=5.02 log10 copies/10^6 PBMCs, IQR=4.70-5.30) had significantly higher pVLs than asymptomatic carriers (median=4.11 log10 copies/10^6 PBMCs, IQR=3.55-4.66, p=0.0015). HAM/TSP patients had pVLs between 5.00-5.73 log10 copies/10^6 PBMCs (10-54%), ATLL patients had pVLs of 4.83 and 5.50 log10 copies/10^6 PBMCs (7% and 33%, respectively); patients with uveitis had pVLs of ~4.00 log10 copies/10^6 PBMCs (~1%) and PG patient had pVL of 4.56 log10 copies/10^6 PBMCs (4%). Patients with HAM/TSP and ATLL had significantly higher pVL (median=5.25 log10 copies/10^6 PBMCs) than those with other disorders (median=4.04 log10 copies/10^6 PBMCs, p=0.017).

Conclusion

HTLV-I pVL seems to be associated with pathogenic phenotype, being higher in subjects with HTLV-I associated diseases compared to those with other disorders.

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