

# Molecular and clinical effects of betamethasone in human t-cell lymphotropic virus type-i-associated myelopathy/tropical spastic paraparesis patients

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There is no effective therapy for human T-cell lymphotropic virus type I (HTLV-I)-associated myelopathy/tropical spastic paraparesis (HAM/TSP). Glucocorticoids are effective to reduce the motor disability in these patients, but its role as anti-spastic drugs is unknown. Here it is reported the use of corticosteroids in HAM/TSP. The goal was to find reliable molecular markers linked to treatment effectiveness. The clinical efficacy of corticosteroids was studied in 22 HAM/TSP. The treatment was a single dose of 7.0mg of systemic betamethasone. Pre-treatment samples were obtained immediately before steroid administration and post-treatment samples were collected after 5 days. Neurological disability was evaluated by the Osame's Motor Disability Scales. Relative levels of Tax, Foxp3, IL-10, TGF- $\beta$ , CTLA-4, and GITR mRNA were measured and the percentage of CD4 +Foxp3 + and CD4 +Tax + populations was quantified in PBMCs by real-time PCR and flow cytometry, respectively. The same parameters w