



MEETING ABSTRACT

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# Does helminthic infection alter the clinical course of HTLV-1 infection?

Michael A Sundberg<sup>1\*</sup>, Marshall J Glesby<sup>2</sup>, Edgar M Carvalho<sup>3</sup>

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## Introduction

HTLV-1 is associated with the development of HAM/TSP and overactive bladder (OB). A higher prevalence of helminthic coinfection has been observed among those infected with HTLV-1. Because helminthic infection may modify the immune response and influence clinical outcomes in HTLV-1 infection, we investigated the development of HAM/TSP and OB in HTLV-1 positive individuals with and without helminthic coinfection.

## Methods

HTLV-1 patients enrolled in a cohort study between 2004-2010 were classified as coinfecting and non-coinfecting based on stool samples. All patients were followed at least two years from initial evaluation, with yearly clinical assessments. Disease-free survival for OB was estimated using the Kaplan-Meier method, and the relationship between helminthic infection and development of OB was assessed by Cox proportional hazard modeling.

## Results

Seventy-four coinfecting and 79 non-coinfecting patients were followed. A total of 92 helminthic infections were observed in the coinfecting group. One patient from each group developed HAM/TSP during followup. Fourteen and 17 patients developed OB from the coinfecting and non-coinfecting groups, respectively. There was no association between helminthic infection and risk of OB (hazard ratio 0.91, 95% CI 0.43-1.89,  $p = 0.79$ , adjusted for sex).

## Discussion

We found no difference in the risk of development of OB in HTLV-1 and helminthic coinfecting and non-coinfecting patients. The incidence of HAM/TSP was low in each group. These data indicate that general helminthic infection does not modify development of HAM/TSP or OB. Future studies should address the potential association between specific helminthic infections and risk of neurologic disease in HTLV-1 infection.

## Author details

<sup>1</sup>Stanford University School of Medicine, Stanford, CA, 94305, USA. <sup>2</sup>Weill Cornell Medical College, New York, NY, 10065, USA. <sup>3</sup>Serviço de Imunologia, Hospital Universitário Professor Edgard Santos, Universidade Federal da Bahia, Salvador, BA, Brazil.

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\* Correspondence: [msundber@stanford.edu](mailto:msundber@stanford.edu)

<sup>1</sup>Stanford University School of Medicine, Stanford, CA, 94305, USA  
Full list of author information is available at the end of the article