



POSTER PRESENTATION

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The relation between hemispheric lateralisation and measures of immune competence and adherence in Human Immunodeficiency Virus Type 1 (HIV-1)

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From 17th International Symposium on HIV and Emerging Infectious Diseases (ISHEID) Marseille, France. 23-25 May 2012

Introduction

Communication from the brain to the immune system is influenced by hemispheric lateralisation (HL). Left-HL is immunopotentiating, right-HL is immunosuppressive. Only one study has examined the effects of HL on the progression of HIV (Gruzelier *et al.*, 1996). That study included a small sample with very little control over third variables. The present study tested whether left HL predicted higher CD4 and CD8 levels, statistically controlling for confounders.

Methods

Employing two neuropsychological assessments of HL (line bisection task and Zenhausern's Hemispheric Preference Test), 69 HIV-1+ patients were followed prospectively. Numerous exclusion criteria and confounder assessments were employed (e.g., age, sex, mode of contraction, medication adherence) to provide a more rigorous and controlled analysis.

Results

The present work corroborated the theory of asymmetrical influence on HIV immunity by HL via a moderator: ethnicity. The main analysis of the research findings did not attain statistical significance in the whole group of patients. However, among African patients, left-HL predicted better immunity, while no such relationship was seen in European patients, independent of confounders. Further observations were made between HL and HIV-

relevant behaviours. Left HL was related to higher number of sexual partners in Europeans. A near-significant relationship was observed between left HL and longer periods between HIV clinic attendances in Africans.

Conclusions

The present study adds new information concerning a moderating factor of the HL-immunity relationship in HIV. As expected, left-HL predicted higher CD4 and CD8 counts, but only in African patients. Further, the added methodological and statistical control employed, extend the validity of the HL-immunity relationship. Moreover, the present study has uncovered behavioural implications of HL in HIV disease. Potential explanations for neurobiological pathways in the relationship between HL and immunity are discussed.

Published: 25 May 2012

doi:10.1186/1742-4690-9-S1-P79

Cite this article as: Sumner *et al.*: The relation between hemispheric lateralisation and measures of immune competence and adherence in Human Immunodeficiency Virus Type 1 (HIV-1). *Retrovirology* 2012 **9** (Suppl 1):P79.

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