Title
Neurocognitive Impairment Among HIV-Infected Military Beneficiaries: The Impact of Linguistic Background

Journal
Open Forum Infectious Diseases, 2(suppl_1)

ISSN
2328-8957

Authors
Deiss, Robert
Marquine, Maria
Crum-Cianflone, Nancy
et al.

Publication Date
2015-12-09

DOI
10.1093/ofid/ofv133.1212

Peer reviewed

1659. Neurocognitive Impairment Among HIV-Infected Military Beneficiaries: The Impact of Linguistic Background

Robert Deiss, MD[1,2,3]; Maria Marquine, PhD[4,5]; Nancy Crum-Cianflone, MD, MPH[6]; Frederica Law, MPH, MSW[7,8]; Xun Wang, MS[9]; Anuradha Ganesan, MD, MPH[10]; Jason Okulicz, MD, FIDSA[11]; Scott Letendre, MD[5,12]; Brian Agan, MD, FIDSA[2,8]; David Moore, PhD[4,5]; [1]Naval Medical Center San Diego, San Diego, California; [2]Infectious Disease Clinical Research Program, Uniformed Services University of the Health Sciences, Rockville, Maryland; [3]Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, Maryland; [4]Psychiatry, University of California, San Diego, La Jolla, California; [5]HIV Neurobehavioral Research Program, San Diego, California; [6]Infectious Diseases Clinical Research Program, San Diego, California; [7]Infectious Disease Clinical Research Program, Rockville, Maryland; [8]Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, Maryland; [9]The Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, Maryland; [10]Infectious Disease Clinical Research Program, Uniformed Services University of the Health Sciences, Rockville, Maryland; [11]San Antonio Military Medical Center, Fort Sam Houston, Texas; [12]Medicine, University of California, San Diego, La Jolla, California

Session: 231. HIV: Neurological Complications and HAND
Saturday, October 10, 2015: 12:30 PM

Background. Neurocognitive impairment (NCI) among HIV-infected individuals is commonly reported. Members of ethnic/racial minority groups that are HIV-infected tend to present with higher rates of NCI, but the underlying reasons for this difference in outcomes are not fully understood. We examined the impact of native language on HIV-associated NCI in a cohort of HIV-infected military beneficiaries.

Methods. Neurocognitive performance was assessed using a comprehensive neuropsychological battery. Raw neuropsychological test scores were normalized for age, education, sex and race. NCI was determined using a global deficit score (GDS) approach, which weighs and averages severity performance deficits of the entire neuropsychological test battery. Multivariate models were constructed to assess the impact of non-native English on NCI.

Results. Participants included 200 HIV-infected military beneficiaries (median age 36 years old) who were Caucasian (48.5%), African American (29%), Hispanic (14%) and Asian/Pacific Islander individuals (8.5%). Among all respondents, 9.5% (n = 19) reported a native language other than English, and this group was more likely to test positive for NCI than native English speakers (42% versus 17%, $p = 0.007$). There were no differences between native speakers and non-native speakers with respect to CD4 count, CD4 nadir, HIV viral load, duration of HIV infection, and time on antiretroviral medications. In multivariate analysis, adjusting for age, post-secondary education, cd4 nadir and highest viral load, non-native English remained independently associated with NCI (OR 3.9, [95% CI 1.4–11.7]). Additional models adjusting for ethnicity and education yielded similar results.

Conclusion. In our military population, linguistic background was more important in characterizing NCI than HIV-related factors. The small size of our sample should be noted; nonetheless, our data suggest that non-native English speakers may be disproportionately diagnosed with NCI, whether the result of a direct language/testing effect or unmeasured factors related to linguistic heritage. Further research of linguistic effects on NCI testing among HIV-infected individuals is warranted.

Disclosures. **All authors:** No reported disclosures.