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

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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 weights 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.

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