How helpful are the European AIDS Clinical Society cognitive screening questions in predicting cognitive impairment in an aging, well-treated HIV-positive population?

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OBJECTIVES

Diagnosing neurocognitive impairment (NCI) in HIV infection requires time-consuming neuropsychological assessment. Screening tools are needed to identify when neuropsychological referral is indicated. We examined the positive and negative predictive values (PPVs and NPVs, respectively) of the three European AIDS Clinical Society (EACS) screening questions in identifying NCI.

METHODS

The Neurocognitive Assessment in the Metabolic and Aging Cohort (NAMACO) study recruited patients aged ≥45 years enrolled in the Swiss HIV Cohort Study between 1 May 2013 and 30 November 2016. NAMACO participants (1) answered EACS screening questions, (2) underwent standardized neuropsychological assessment and (3) completed self-report forms [Center for Epidemiologic Studies Depression Scale (CES-D)] rating mood. NCI categories were defined using Frascati criteria. PPVs and NPVs of the EACS screening questions in identifying NCI categories were calculated.

RESULTS

Of 974 NAMACO participants with complete EACS screening question data, 244 (25.1%) expressed cognitive complaints in answer to at least one EACS screening question, of whom 51.3% had NCI (26.1% HIV-associated and 25.2% related to confounding factors). The PPV and NPV of the EACS screening questions in identifying HIV-associated NCI were 0.35 and 0.7, respectively. Restricting analysis to NCI with functional impairment or related to confounding factors, notably depression, the NPV was 0.90. Expressing cognitive complaints for all three EACS screening questions was significantly associated with depression (P < 0.001).

CONCLUSIONS

The EACS screening questions had an NPV of 0.7 for excluding patients with HIV-associated NCI as defined by Frascati criteria. The PPV and NPV may improve if NCI diagnoses are based on new criteria.