Inflammation and cardiovascular biomarkers are associated with cognitive performance in HIV patients. Combination antiretroviral therapy restores CD4+ cell counts and suppresses viral replication. However, immune activation and inflammation may persist.

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Objective: The aim of this work was to examine if some cognitive functions in HIV-infected patients were related to some inflammation and cardiovascular biomarkers.

Participants and Methods: 12 volunteers, who were part of a larger longitudinal study, were recruited from the Hospital Clinic of Barcelona (Spain). Selected patients were on CART (EFV/FTC/TDF), viral load <37 copies, CD4+ >250 cell/mm3 and without any significant coinfection.

Data examined here are cross-sectional and obtained in the baseline measurement. Participants underwent comprehensive neurocognitive and medical evaluations. The neuropsychological assessment comprised executive functions, speed of cognitive processing, motor speed, and learning and memory. Inflammation was evaluated by determination of plasma IL-6 and TNF-α. D-dimer was used as a marker of cardiovascular disease. A correlational analysis was performed. Bonferroni’s correction was applied to comparisons.

Results: IL6 was positively related with cognitive slowing. D-dimer was positively associated with cognitive and psychomotor slowing, and inversely with verbal learning. A trend was found between IL6 and mistakes in cognitive flexibility, and also between d-dimer and mistakes in cognitive inhibition. However, statistical significance disappeared when Bonferroni’s correction was applied.

Conclusions: Data suggest that some inflammation and cardiovascular markers could adversely affect cognitive performance in HIV patients, even in patients receiving treatment in the setting of a chronic and stable disease and without a HAND diagnosis. Results should be interpreted with caution due to limitations of the study.

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Switching to a non-Efavirenz containing regime improves cognition in HIV-infected patients

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Objective: HAND is a frequent comorbidity in HIV-infected patients. The aim of this study is to assess the effect of switching Atiprila (a regimen containing Efavirenz which is known for its adverse neurological of psychiatric events), to Eviplera (same as Atiprila, without Efavirenz) on cognition, hypothesizing patients’ cognition will improve on Eviplera.

Participants and Methods: Participants N=48[32:16] were virologically suppressed male HIV-infected patients aged 25-50 on Atiprila, without neurocognitive complaints. They were randomized (2:1) to receive Eviplera (intervention group) or continue on Atiprila (control group) both for 12 weeks. At baseline and week 12, patients underwent neuropsychological testing, assessing the following domains: conceptual organization, executive functioning, speed of information processing, learning, memory, attention and working