Improvement of Depression and Anxiety After Discontinuation of Long-Term Efavirenz Treatment

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Background: Efavirenz is part of first-line antiretroviral therapy guidelines of WHO since 2002. The side effects of efavirenz are mainly neuropsychiatric and generally considered to be mild and transient. Recent studies indicate however that discontinuation of chronic efavirenz treatment can be observed in up to 50% of cases, possibly related to long term neuropsychiatric side-effects. The aim of this study was to 1) assess neuropsychiatric symptoms in HIV-infected patients on long-term efavirenz therapy and 2) study the effect of a switch to non-efavirenz containing anti-retroviral treatment on neuropsychiatric symptoms.

Methodology: In an observational clinical trial, 47 HIV-infected participants on long-term efavirenz treatment were included with suppressed viral loads and high CD4 cell counts. 23 reported signs and symptoms (mainly neuropsychiatric symptoms or physical complaints) and 24 asymptomatic patients were included as controls. All participants completed three self-report questionnaires on neuropsychiatric symptoms.

All symptomatic patients were switched to a non-efavirenz containing regimen and were retested 2 week and 3 months after switching. The depression-anxiety-stress-scale (DASS) was used to assess anxiety, depression and stress, the symptom-checklist (SCL-90) to assess a variety of neuropsychiatric symptoms and the outcome-questionnaire (OQ-45) to assess daily life functioning. Data were analyzed using multivariate ANOVA for baseline group comparisons and repeated measures ANOVA to analyze any change in the group of switchers over time. Linear regression was used to analyze prediction of symptom change after switching.

Results: Neuropsychiatric symptoms were common among HIV-infected patients on long-term efavirenz therapy, mainly being depression, anxiety, stress, insufficiency in thinking and paranoia. After switching, these symptoms improved significantly to near normal levels. These effects were most prominent for depression, anxiety and stress symptoms (using DASS and SCL-90). Improvement in neuropsychiatric symptoms was best predicted by high baseline symptoms, using the SCL-90.

Conclusions: Neuropsychiatric symptoms are common among HIV-infected subjects and may be caused by different factors/agents, including long-term efavirenz use. Neuropsychiatric assessment, the SCL-90 in particular, could identify those that may benefit most from the discontinuation of efavirenz.