Persistent immune activation and depression among Ugandans initiating ART

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• No disclosures

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Background and Methods

- Chronic inflammation, even after effective ART, has been associated with numerous comorbidities and mortality
- Relationship between inflammation and depression less clear

Byakwaga H et al., *JID* 2014; Siedner MJ et al., *JID* 2017; Lee S et al., *JID* 2017; Martinez P et al., *JAIDS* 2014
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EXPOSURE

- Log$_{10}$ marker level
- Month since ART start

- Δ
- IL-6
- D-dimer
- sCD14
- sCD163
- KT ratio

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OUTCOME

- Depressive symptom severity during first 2 years of ART use
- Continuous
- Binary probable depression

• GEE regression models, adjusted for demographic and clinical characteristics

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1. Depressive symptom score: continuous outcome

- Models adjusted for age, sex, BMI, marital status, education, asset index, baseline depressive symptom score, CD4+ count, viral load suppression, tuberculosis co-infection, time on ART, year of enrollment, heavy drinking, and smoking.

*Lowest quartile used as reference
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2. Probable depression: binary outcome

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Discussion

• Greater decreases in inflammatory biomarkers, particularly sCD14 and KT ratio, were associated with lower future depressive symptoms after ART initiation.

• Additional measures, beyond suppressive ART, may be necessary to reduce mental health disturbances in persons living with HIV.

• Measures that target macrophage activation and tryptophan metabolism may be effective.
References


