Uganda Virus Research Institute

Abstract # 322
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Atorvastatin adjunct therapy reduced T-cell activation among HAART-treated suboptimal immune responders: A randomised cross-over placebo controlled trial

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Background

- Up to 40% of individuals exhibit suboptimal immune recovery during cART despite sustained viral suppression [1].
- Immune activation associated with chronic HIV infection has been shown to interfere with immunological recovery during suppressive cART [2,3].
- Immune activation due to chronic HIV infection has been associated with increased risk of post-cART mortality [4] and non-AIDS-related events such as atherosclerosis [5].

Hypothesis

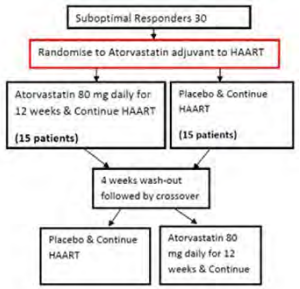
Atorvastatin (80mg daily for 12 weeks) could reduce immune activation levels by 25% when given as adjunct therapy among cART-treated suboptimal immune responders, versus placebo

Objectives

To determine the effect of atorvastatin adjunct therapy on T-cell immune activation among cART-treated adults with CD4 increases ≤295cells/µl despite 7 years of suppressive antiretroviral therapy.

Study design

RCT double-blind cross-over trial, nested in IDI cohort

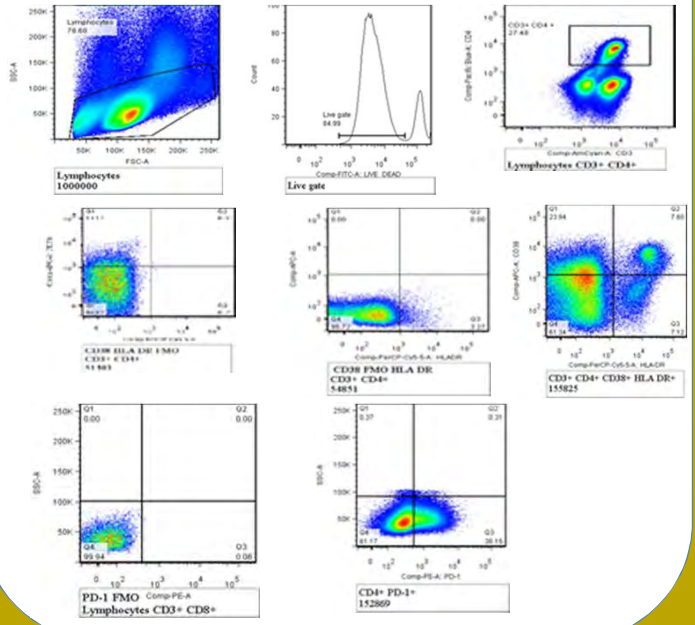


Materials and methods

- PBMC collected at 0, 12, 16, 28 weeks
- Immune activation determined by co-expression of HLADR and CD38 by CD4(CD8)+ T-cells
- Immune exhaustion measured by expression of programmed death 1 marker (PD-1) by CD4(CD8)+ T-cells

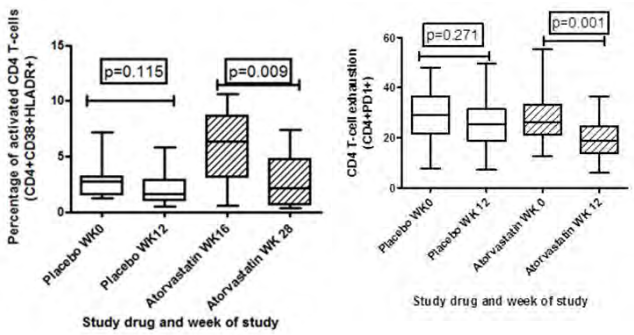


Gating strategy



Results

CD4 T-cell activation and exhaustion among HAART treated adults that received atorvastatin versus placebo



Conclusions

- Atorvastatin reduced T-cell immune activation and exhaustion among cART-treated adults with suboptimal immune recovery.
- Atorvastatin adjunct therapy could improve immune recovery among cART-treated adults with persistent immune activation.

References

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2. Nakanjako et al , BMC Infect Dis. 2011;11:43
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Acknowledgements

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