Effects of Vitamin D Supplementation on Carotid Intima-Media Thickness in HIV+ Youth

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ABSTRACT

BACKGROUND

HIV-infected patients are at an increased risk of cardiovascular disease (CVD) compared to uninfected population. Recent evidence suggests vitamin D supplementation may decrease CVD risk factors. We aimed to determine if vitamin D supplementation affects carotid intima-media thickness (IMT) in HIV-infected youth.

OBJECTIVES

- This primary objective of this study was to determine the effects of vitamin D supplementation in HIV-infected youth 24 months after supplementation.
- Secondary objectives included comparing the results to an uninfected control group.

METHODS

- STUDY DESIGN: Multicenter, active-controlled, double-blind trial investigating two doses of oral vitamin D3 30,000 IU/week and 120,000 IU/week, in a standard dose of 10,000 IU/week given monthly for 24 months.
- Inclusion criteria: Median age 10-13 years; diagnosed with HIV; CD4 count ≥ 250 cells/mm³; on ART; had never received vitamin D supplementation; attended HIV clinic for at least six months.
- Exclusion criteria: Any condition requiring vitamin D supplementation; BMI ≤ 18.5; ≥ 70 years; on antiretroviral drugs known to affect vitamin D metabolism.
- Randomization stratified by current EFV use.

RESULTS

- There were no significant changes in IMT between the two arms for the study period.

CONCLUSIONS

- There was no significant difference in carotid IMT between HIV-infected and uninfected youth.
- Vitamin D supplementation did not significantly affect IMT in HIV-infected youth.

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