Vitamin D deficiency and insufficiency in HIV-infected children and adolescents.

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BACKGROUND

- Mortality and morbidity among HIV-infected patients has dramatically decreased since the introduction of combination antiretroviral therapy (cART).
- Antiretroviral drugs such as efavirenz (EFV) and tenofovir (TFV) are negatively associated with vitamin D levels.1-4
- Vitamin D deficiency in HIV-infected patients has been associated with several complications such as a poorer immune system and more opportunistic infections, but also cardiovascular disease and renal impairment.6

Objective

To determine the prevalence of vitamin D deficiency in a paediatric HIV-infected population and to investigate the influence of demographic and HIV- or cART-related factors on the prevalence of vitamin D deficiency.

METHODS

- Study design: A retrospective cross-sectional study.
- Participants: 97 HIV-infected children (age range: 1–18 years) were included from the Emma Children’s Hospital in Amsterdam.
- Measurements: Risk factors associated with vitamin D deficiency or insufficiency, ≤10 ng/mL and <30 ng/mL respectively, were analysed.
- Analyses: Univariable and multivariable logistic regression analyses were used to investigate associations between vitamin D deficiency and demographic, HIV- and cART-related characteristics.

CONCLUSION

- We observed vitamin D deficiency or insufficiency in 40% of our HIV-infected paediatric population.
- With the current knowledge on vitamin D status, HIV-infection and associated co-morbidities, this warrants further investigation, especially in HIV-infected children with the prospect of lifelong HIV and cART exposure.
- An important limitation was the lack of a matched healthy control group. A longitudinal study with a matched control group is needed to confirm and further investigate the issue of vitamin D status in HIV-infected children.

REFERENCES


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