

POSTER PRESENTATION

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Vitamin D levels among HIV-infected patients – peculiar features

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From The 9th Edition of the Scientific Days of the National Institute for Infectious Diseases Prof Dr Matei Bals Bucharest, Romania. 23-25 October 2013

Background

25-hydroxyvitamin D (25[OH]D) plays an essential role in the homeostasis of calcium and bone metabolism, but it is acknowledged as an immunomodulator as well. Several studies have described a high prevalence of 25[OH]D deficiency in HIV-infected patients, as well as its role in predicting disease progression.

Methods

We performed a descriptive, cross-sectional study on a group of 68 HIV-infected patients monitored in the Regional HIV/AIDS Centre Mureș, during December 2012-February 2013. We determined plasma levels of 25[OH]D. We estimated the proportion of patients with 25[OH]D deficiency/insufficiency and correlated 25[OH]D levels to HIV-RNA plasma viral load, CD4+ T-cells count and associated pathology. Data were compared to those obtained from a group of healthy, HIV-negative volunteers. Statistical analysis was performed using the GraphPad program.

Results

We studied 68 C-stage HIV-infected patients, 40 male: 28 female, with an average age of 26 and a median of 23. The average plasma 25[OH]D level was 30.94 ng/mL, median 30 ng/mL in HIV-positive patients compared to an average of 44.72 ng/mL and median 39.82 ng/mL in HIV-negative subjects ($p=0.0109$). 25[OH]D deficiency <20 ng/mL was found in 23.52% HIV-infected patients, while 26.47% HIV-positive subjects had medium levels of 25[OH]D insufficiency, between 20-30 ng/mL. Only 2 patients had severe 25[OH]D deficiency, below 10 ng/mL.

We did not find any statistically significant correlations of 25[OH]D levels with CD4+ T-cells level, HIV-RNA plasma viral load or protease inhibitor therapy. Patients with HIV-tuberculosis co-infection had significantly lower levels of 25[OH]D ($p=0.0454$) than HIV-positive subjects without tuberculosis.

Conclusion

25[OH]D plasma levels are lower in HIV-infected patients compared to the general population. Low 25[OH]D levels are reported in patients with HIV-tuberculosis co-infection. Low 25[OH]D levels may indicate unfavorable outcome in HIV-infected patients.

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Published: 16 December 2013

doi:10.1186/1471-2334-13-S1-P11

Cite this article as: Chiriac et al.: Vitamin D levels among HIV-infected patients – peculiar features. *BMC Infectious Diseases* 2013 **13**(Suppl 1):P11.

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