Vitamin D status in a HIV-infected cohort from south of Spain: descriptive analysis

C. García-Figueras[1] M. Cayón[2], P. Bancalero[3], A. Terrón[3]
Internal Medicine Unit[1], Endocrinology and Nutrition Unit[2] Infectious Diseases Unit[3].
Hospital S.A.S. Jerez de la Frontera, Jerez de la Fra., Spain.

Introduction

Vitamin D deficiency is common among people living with HIV worldwide. There is a lack of studies focusing on prevalence and consequences of low levels of vitamin D in our health care area (south of Spain). The main aim of this study is to know the status of vitamin D and its consequences on parameters related to calcium metabolism in a cohort of patients with HIV infection in our area.

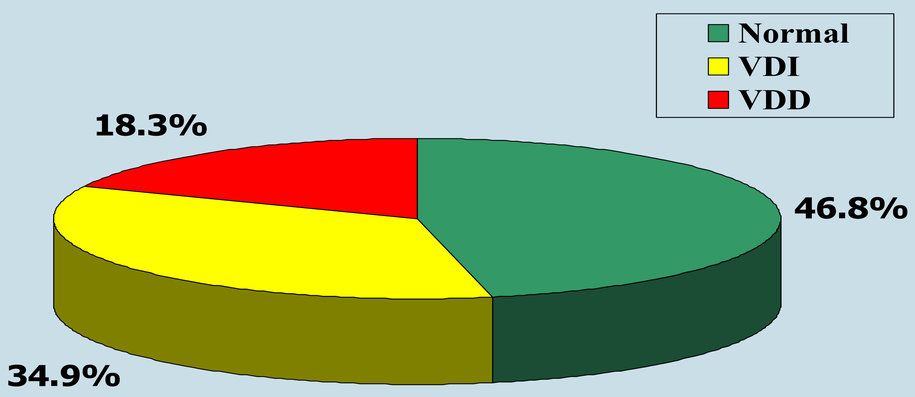
Methods/ Design

Cross-sectional study encompassing HIV-infected outpatients treated in our hospital. Epidemiological variables and data related to vitamin D and calcium-phosphorus metabolism (i-PTH, serum calcium and phosphorus) were recorded. Vitamin D insufficiency (VDI) was defined as 25 OH-D levels <30 ng/mL and vitamin D deficiency (VDD) was defined as values of serum 25-hydroxyvitamin D below 20 ng/mL. Secondary hyperparathyroidism related to low levels of vitamin D was defined as i-PTH levels higher than 65 pg/mL.

Results

109 HIV patients were included (mean age: 46 ± 6.9 years; 87.2% males). Median vitamin D level: 30.9 ±13.8 ng/ml.
Figure 1 shows the percentage of patients according to vitamin D status.
We found no differences in prevalence of VDI and VDD related to gender or presence of HCV co-infection.
According to status of vitamin D (normal, VDI and VDD), significant differences in laboratory variables related to calcium-phosporus metabolism were not observed except in serum phosphorus levels (p = 0.04) and i-PTH (p = 0.039) (table 1).
Secondary hyperparathyroidism linked to low levels of vitamin D was found in the 20.4% of the cohort (Figure 2).

Figure 1: Distribution of the cohort according to vitamin D status.



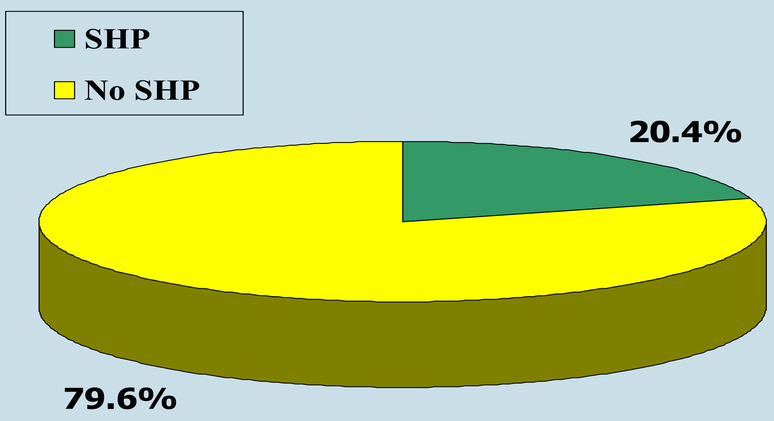
VDI: vitamin D insufficiency; VDD: vitamin D deficiency

Table 1: Laboratory variables according to vitamin D status.

	All (n = 109)	Normal (n = 51)	VDI (n = 38)	VDD (n = 20)	p[a]
Vitamin D (ng/mL)	30.9 ± 13.8	41.2 ± 12	24.2 ± 2.9	15.2 ± 2.9	<0.001
Calcium (mg/dL)	9.6 ± 0.4	9.7 ± 0.4	9.7 ± 0.3	9.6 ± 0.5	0.52
Phosphorus (mg/dL)	3 ± 0.5	3 ± 0.5	2.9 ± 0.6	3.2 ± 0.6	0.04
i-PTH (pg/mL)	50.2 ± 20.9	49.1 ± 18.9	46.9 ± 17.6	61.4 ± 28.6	0.039

a) from ANOVA test; VDI: vitamin D insufficiency; VDD: vitamin D deficiency

Figure 2: Distribution of the cohort according to presence of secondary hyperparathyroidism.



SHP: secondary hyperparathyroidism

Conclusions

Prevalence of hypovitaminosis D in our HIV-infected patients from south of Spain is very common.

However, in our cohort, we found that its repercussions on calcium-phosphorus homeostasis are weak.

Nevertheless, further studies are ongoing in our HIV-infected population to expand the knowledge on their clinical implications.