

15th Annual Conference of the British HIV Association



1-3 April 2009, Liverpool, UK

VITAMIN D AND CALCIUM SUPPLEMENTS REVERSE THE SECONDARY HYPERPARATHYROIDISM THAT COMMONLY OCCURS IN HIV PATIENTS ON TDF-CONTAINING HAART

HIV Med 2009 Apr 1-3; 10(Suppl. 1):40 (abstract no. P89)

K Childs¹, C Kadish², W Branch-Elliman², S Fishman², M Mullen² and AD Branch²

¹ King's College Hospital, London, UK, ² Mount Sinai School of Medicine, New York, NY, USA

BACKGROUND: Abnormalities of bone are common in patients with HIV infection. Tenofovir (TDF) decreases bone mineral density and raises PTH (Physicians Desk Ref, Childs *et al.*, ISDA, 2009).

METHODS: Baseline 25(OH)D and PTH levels were measured in 45 HIV- infected men. Those with suboptimal 25(OH)D (<30 ng/mL) were advised to take daily vitamin D3 (VD3) supplements: 2800 IU [25(OH)D < 10]; 1800 IU [25(OH)D = 10–20]; 800 IU [25(OH)D = 20–30]. All were advised to take 1 g calcium citrate daily. Adherence was monitored. Follow-up tests were performed on 20 subjects: 16 on TDF-containing HAART; 4 on non-TDF-containing HAART.

RESULTS: TDF use and suboptimal 25(OH)D levels were strongly associated with PTH abnormalities. Among the 32 subjects with suboptimal 25(OH)D, mean PTH was 80 ± 32 pg/mL in those on TDF and 56 ± 19 pg/mL in those on non-TDF HAART ($P=0.02$). Among subjects with suboptimal 25(OH)D, 37% (10/27) on TDF had PTH >ULN, indicating secondary hyperparathyroidism (SHPT), while none of the 10 subjects with low vitamin D on non-TDF HAART had SHPT ($P=0.03$). On an intention-to-treat basis, follow-up of the 17 subjects advised to take VD3, 25(OH)D rose 9.8 ± 5.6 ng/mL ($P<0.001$) and PTH fell 18.9 pg/mL ± 31.7 ($P=0.002$). No patient developed hypercalcaemia. PTH rose 4.4 pg/mL among subjects in the bottom tertile of baseline PTH values. In contrast, it fell 5.3 pg/mL among subjects in the middle tertile, and fell 44.7 pg/mL among subjects in the top tertile ($P=0.001$, ANOVA). All subjects in the top tertile were on TDF and all experienced a PTH decrease. At follow up SHPT was reversed in the four subjects who had SHPT at baseline. In these patients, 25(OH)D rose 12.5 ± 7.7 ng/mL and PTH fell 62.3 ± 9.0 pg/mL.

CONCLUSIONS: VD3/calcium supplements increased serum 25(OH)D and decreased PTH. Baseline PTH values were influenced by 25(OH)D levels and TDF use; PTH changes were dependent on baseline PTH values. Vitamin D3 and calcium are a safe and effective treatment for HAART- associated hyperparathyroidism.

2009-04-01
P89

Copyright © 2009 - [British HIV Association \(BHIVA\)](#) Reproduction of this abstract (other than one copy for personal reference) must be cleared through the BHIVA Organising Secretariat 1 Mountview Court, 310 Friern Barnet Lane, London N20 0LD