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BODY COMPOSITION CHANGES IN HIV-INFECTED PATIENTS WITH LIPOATROPHY 1 AND 2 YEARS AFTER SWITCHING FROM STAVUDINE TO TENOFOVIR DISOPROXIL FUMARATE

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BACKGROUND: Long-term use of stavudine in HIV-infected patients has been implicated in the development of lipoatrophy. Recent data suggest that there is a modest improvement in lipoatrophy one year after replacing stavudine with tenofovir disoproxil fumarate. However, it has not been investigated so far if this effect is maintained during the second year after switching.

OBJECTIVES: To determine body composition in a group of HIV-infected patients with clinically evident lipoatrophy 1 and 2 years after switching from stavudine to tenofovir.

METHODS: Ten HIV-infected patients (eight males, two females; age 43.8 ± 6.0 years) with lipoatrophy were included in the study. All patients were receiving a stavudine-containing antiretroviral regimen for at least 1 year. Eight patients were also receiving a protease inhibitor and another nucleoside analogue; two patients were also receiving a non-nucleoside reverse transcriptase inhibitor and lamivudine. In all 10 patients stavudine was replaced by tenofovir, without other medication changes. The patients were assessed at baseline and weeks 48 and 96 by dual energy X-ray absorptiometry (DEXA). Bone mineral content (BMC), fat (FAT) and lean body mass (LEAN) were evaluated for whole body as well as regionally (arms, legs, trunk). Comparisons were made using paired t-tests.

RESULTS: Results (means \pm SD) are shown in Table 1.

Table 1. (Abstract 40)

Variable	Week 0	Week 48	Week 96	P_{0-48}	P_{0-96}	P_{48-96}
Weight (kg)	67.4 \pm 10.4	70.6 \pm 13.8	70.9 \pm 12.9	0.028	0.006	0.623
BMC total (kg)	2.8 \pm 4.4	2.8 \pm 4.7	2.8 \pm 4.8	0.874	0.482	0.445
LEAN total (kg)	54.2 \pm 7.1	53.9 \pm 7.7	53.7 \pm 6.7	0.581	0.441	0.635
FAT total (kg)	10.4 \pm 5.1	13.9 \pm 7.7	14.4 \pm 7.5	0.008	0.006	0.175
Arms FAT (kg)	0.9 \pm 0.8	1.3 \pm 1.1	1.2 \pm 1.0	0.067	0.219	0.648
Legs FAT (kg)	1.6 \pm 0.8	2.5 \pm 1.6	2.6 \pm 1.6	0.008	0.006	0.565
Limb FAT (kg)	2.5 \pm 1.4	3.8 \pm 2.5	3.8 \pm 2.4	0.014	0.021	0.869
Trunk FAT (kg)	7.5 \pm 3.9	9.6 \pm 5.4	10.2 \pm 5.3	0.007	0.005	0.106

CONCLUSIONS: In a group of HIV-infected individuals with lipoatrophy, replacing stavudine with tenofovir resulted in a modest but significant improvement in lipoatrophy after 48 weeks of treatment. The beneficial effect of switching on fat mass was maintained during the second year of treatment, but no further improvement was noticed.



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