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BODY COMPOSITION CHANGES IN TREATMENT-EXPERIENCED HIV-INFECTED PATIENTS INITIATING AN ATAZANAVIR-CONTAINING ANTIRETROVIRAL REGIMEN

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BACKGROUND: Body habitus changes have emerged as a common and disturbing problem among HIV-infected patients. Atazanavir (ATV) is a protease-inhibitor recently introduced in the treatment of HIV infection. ATV has favourable effects on lipids, but its long-term effects on body composition have not been clarified.

OBJECTIVE: To detect body composition changes in a group of treatment-experienced HIV-infected patients before and after 48 weeks of treatment with an atazanavir-containing antiretroviral regimen.

METHODS: Seventeen treatment-experienced HIV infected patients aged 46.4 ± 10.8 years were included in the study. Their antiretroviral regimen was changed to boosted ATV + either 2NRTIs (14 patients) or 1NRTI + efavirenz (3 patients), because of virological failure, lipodystrophy or metabolic disturbances. No patient was placed on stavudine. A subgroup of patients discontinuing d4T/AZT ($n=9$) was studied separately. Patients' body composition was assessed at baseline and week 48 by DEXA. Bone mineral content (BMC), fat (FAT) and lean body mass (LEAN) were evaluated for whole body as well as regionally. Statistical analysis involved Student's *t*-test for paired samples for comparison of means. Statistical significance was set at 0.05. Results are means \pm SD.

RESULTS: 1). No significant changes in body weight ($BW_1=77.0 \pm 11.9$ kg, $BW_2=78.2 \pm 11.5$ kg, $P=0.097$), lean body mass ($LEAN_1=57.2 \pm 9.1$ kg, $LEAN_2=56.5 \pm 9.5$ kg, $P=0.138$) and bone mineral content ($BMC_1=2705 \pm 559$ g, $BMC_2=2747 \pm 552$ g, $P=0.179$) were observed between the two assessments. 2). Total fat mass significantly increased ($FAT_1=17.1 \pm 6.3$ kg, $FAT_2=19.0 \pm 6.0$ kg,

$P=0.013$). 3). Regional analysis showed a significant increase in trunk FAT (trunk FAT₁=12.0 ±4.4 kg, trunk FAT₂=13.3 ±4.1 kg, $P=0.006$), while limb FAT did not exhibit significant changes (limb FAT₁=4.6 ±2.9 kg, limb FAT₂=5.2 ±2.7 kg, $P=0.101$). 4). FAT changes were more prominent in patients discontinuing d4T/AZT. In this group of patients, a significant increase in total, limb and trunk FAT was evident. 5). Serum cholesterol, HDL-cholesterol and triglycerides did not change significantly (CHOL₁=208 ±76, CHOL₂=205 ±73 mg/dl, $P=0.836$; HDL₁=41 ±8, HDL₂=41 ±11 mg/dl, $P=0.979$; TRIGL₁=336 ±387, TRIGL₂=392 ±532 mg/dl, $P=0.644$).

CONCLUSIONS: In a group of treatment-experienced HIV-infected individuals, switching to atazanavir-containing antiretroviral regimens resulted in a significant increase in the total and trunk fat mass after 48 weeks of treatment; patients switching from d4T/AZT also exhibited an increase in the limb fat mass.

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