Plasma leptin levels in men are not related to the development of lipoatrophy during antiretroviral therapy

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OBJECTIVES: To assess the correlations between the hormone leptin and lipoatrophy in HIV-positive, treatment-naive patients on combination antiretroviral therapy (cART). DESIGN: Case-control study nested in a multicentre cohort of HIV-infected adults. Cases were patients that developed lipoatrophy and controls those who did not. PATIENTS AND METHODS: Clinical parameters and plasma leptin determinations were studied in 97 HIV-1-infected, treatment-naive Caucasian men (10 cases and 87 controls) on an unchanged and virologically successful drug regimen with a zidovudine/lamivudine backbone at baseline and after 2 years of cART. The association of plasma leptin levels and the development of lipoatrophy was investigated.

RESULTS: Two years of cART was not associated with a change in plasma leptin levels. Plasma leptin levels remained sensible to changes in body mass index. There was no difference in leptin levels between patients who developed lipoatrophy and controls, neither before nor after cART. The only predictor of development of lipoatrophy was a higher age (P = 0.02). CONCLUSIONS: Leptin as measured in plasma is unlikely to play a major role in the genesis of lipoatrophy.