

Publication

Androgen and gonadotropin patterns differ in HIV-1-infected men who develop lipoatrophy during antiretroviral therapy : a case-control study

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OBJECTIVES: We compared androgen and gonadotropin values in HIV-infected men who did and did not develop lipoatrophy on combination antiretroviral therapy (cART). **METHODS:** From a population of 136 treatment-naïve male Caucasians under successful zidovudine/lamivudine-based cART, the 10 patients developing lipoatrophy (cases) were compared with 87 randomly chosen controls. Plasma levels of free testosterone (fT), dehydroepiandrosterone (DHEA), follicle-stimulating hormone and luteinizing hormone (LH) were measured at baseline and after 2 years of cART. **RESULTS:** At baseline, 60% of the cases and 71% of the controls showed abnormally low fT values. LH levels were normal or low in 67 and 94% of the patients, respectively, indicating a disturbance of the hypothalamic-pituitary-gonadal axis. fT levels did not significantly change after 2 years of cART. Cases showed a significant increase in LH levels, while controls showed a significant increase in DHEA levels. In a multivariate logistic regression model, lipoatrophy was associated with higher baseline DHEA levels ($P=0.04$), an increase in LH levels during cART ($P=0.001$), a lower body mass index and greater age. **CONCLUSIONS:** Hypogonadism is present in the majority of HIV-infected patients. The development of cART-related lipoatrophy is associated with an increase in LH and a lack of increase in DHEA levels.

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