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Substitution of testosterone in a HIV-1 positive patient with hypogonadism and Wasting-syndrome led to a reduced rate of apoptosis.

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Abstract

Peripheral blood mononuclear cells from HIV infected individuals develop in vitro apoptosis to a much higher extent than healthy donors. Aside from the direct cytopathic effect of HIV, programmed cell death can be induced by such cytokine system imbalance as seen with increased levels of TNF-alpha or the Th1-->Th2-cytokine shift. However, wasting syndrome, which occurs in the majority of AIDS patients is associated with an enhanced expression of TNF-alpha and IL 6 as well. A 37-year-old AIDS patient suffering from wasting syndrome and hypogonadism was treated with 1 alpha-dihydrotestosterone. The rate of apoptotic peripheral blood mononuclear cells was determined before, during and after this therapy. After three weeks of androgen substitution therapy, the rate of spontaneous apoptosis was reduced to 34% and the ionomycin induced apoptosis to 52% of the rate of apoptotic cells at the beginning of the therapy. Moreover, the general and nutritional condition improved remarkably. Thus, we suggest that the use of anabolic drugs for the treatment of AIDS-associated wasting-syndrome would not only improve their general and nutritional condition, but might also prevent the loss of CD4+ T-cells through an inhibition of apoptosis.

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