PubMed Results

Item 1 of 1

1. AIDS Care. 2010 Jul 16:1-8. [Epub ahead of print]

Regulation of oxidative stress in response to acute aerobic and resistance exercise in HIV-infected subjects: a case-control study.

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Abstract

Human immunodeficiency virus (HIV)-infected subjects have increased levels of oxidative stress which could impair immunological function and therefore contribute to the progression of AIDS. These characteristics are usually evaluated at rest and responses to exercise have yet to be evaluated. The aim of the present study was to assess the effect of a bout of aerobic exercise followed by resistance exercises on antioxidant system in HIV-infected and non-HIV subjects. There were included 14 cases (HIV-positive) and 14 controls (HIV-negative). The exercise protocol consisted of a single session of 20 minutes on a cycloergometer followed by a set of six resistance exercises. The activity of glutathione S-transferase (GST) and catalase were measured in plasma samples, total glutathione (TGSH) and thiobarbituric acid reactive substances (TBARS) were measured in erythrocytes. T CD4+ cells, T CD8+, viral load, complete blood count, and white blood count were also assessed. All measurements were performed at three times: baseline, after aerobic exercise, and after resistance exercises. At baseline, the HIV group had lower GST activity than controls, but after the exercise session GST values were similar in both groups. Compared to the control group TGSH was significantly lower in the HIV group at baseline, after aerobic and resistance exercises. The control group presented higher TBARS values after aerobic exercise compared to the HIV group. The neutrophil count was lower in the HIV group after aerobic and resistance exercises. These data indicate that HIV-infected subjects had lower antioxidant activity at rest. Physical exercise stimulated the enzymatic activity similarly in both groups.

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