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EFFECTS OF A LIFESTYLE MODIFICATION PROGRAM IN HIV-INFECTED PATIENTS WITH THE METABOLIC SYNDROME

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OBJECTIVE: A large percentage of HIV-infected patients receiving highly active antiretroviral therapy demonstrate the metabolic syndrome. In this study, we sought to determine whether lifestyle modification improves metabolic syndrome criteria, including waist circumference, blood pressure, fasting blood sugar, triglycerides, and HDL among HIV-infected patients with the metabolic syndrome.

DESIGN: We conducted a randomized, 6-month study in HIV-infected patients with metabolic syndrome as defined by the National Cholesterol Education Program (NCEP). Subjects were randomized to an intensive lifestyle modification program modelled after the Diabetes Prevention Program, which included weekly one-on-one counseling sessions with a registered dietician, or observation (control group).

METHODS: Metabolic syndrome criteria and cardiovascular parameters including blood pressure, body composition, sub-maximal stress testing, lipids, hemoglobin A1C and other biochemical parameters were determined.

RESULTS: Thirty-four patients were randomized and 28 subjects completed the study. Compared to the control group, subjects randomized to the lifestyle modification program demonstrated significant decreases in waist circumference (-2.6 ± 1.1 versus 1.2 ± 1.0 cm, $P=0.022$), systolic blood pressure (-13 ± 4 versus 4 ± 4 mmHg, $P=0.008$), HgbA1C (-0.1 ± 0.1 versus $0.2 \pm 0.1\%$, $P=0.017$), lipodystrophy score (-1.2 ± 0.3 versus 0.9 ± 0.6 ,

$P=0.006$) and increased activity (17.7 ± 14.3 METS versus -33.1 ± 12.7 METS, $P=0.014$) as measured by the Modifiable Activity Questionnaire, but lipid levels did not improve.

CONCLUSIONS: These data demonstrate that intensive lifestyle modification significantly improved important cardiovascular risk indices in HIV-infected patients with the metabolic syndrome. Lifestyle modification may be a useful strategy to decrease cardiovascular risk in this population.

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