

5th International Workshop on Adverse Drug Reactions and Lipodystrophy in HIV



8–11 July 2003, Le Meridien Montparnasse, Paris, France

ONE YEAR METABOLIC AND MORPHOLOGICAL FOLLOW-UP OF HIV-NAÏVE PATIENTS WITH OR WITHOUT TREATMENT

Antiviral Therapy 2003; 8:L33 (abstract 42)

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OBJECTIVE: To compare the role of HIV infection and antiretroviral treatments on insulin sensitivity and other related-metabolic and morphological parameters.

METHODS: Monocentric prospective study in 60 asymptomatic HIV patients followed over 1 year. The results were analysed retrospectively according to the decision to treat ($n=29$), with or without protease inhibitors (PIs; $n=13$ vs. 16), or not to treat.

RESULTS: At baseline, before the decision to treat or not to treat, viral load was higher and CD4 cells lower in the group of treated patients. Body mass index (BMI) was also smaller (24 vs 25.8, $P=0.016$) but no difference was observed in waist-to-hip (W/H) ratio or in insulinaemia and homeostasis model assessment (HOMA). High-density lipoprotein (HDL) cholesterol was lower in PI-treated patients (1.09 ± 0.07 mM vs 1.41 ± 0.08 , $P=0.01$) and fasting glycaemia unexpectedly lower in treated patients (4.6 ± 0.1 mM vs 5.2 ± 0.2 , $P=0.0051$). Over the 1-year follow-up, the BMI and W/H ratio remained stable in untreated patients even if hip circumference increased ($P=0.03$). In the PI-treated patients, but not in the other treated patients, a slight but significant increase in W/H ratio ($P=0.03$) was noted. Similarly, fasting blood glucose did not change in untreated patients, but increased by 0.4 ± 0.1 mM in the PI group ($P=0.045$) and by 0.3 ± 0.1 ($P=0.01$) in the non-PI treated group. Low-density lipoprotein (LDL) cholesterol increased in the PI group (0.9 ± 0.3 mM vs 0.3 ± 0.2 , $P=0.001$) while HDL did not change. HDL cholesterol decreased in untreated patients (1.41 ± 0.08 vs 1.22 ± 0.37 , $P=0.02$). The 2 hours post-glucose (75 g) glycaemia, fasting and post-glucose insulinaemia indices of insulin sensitivity and secretion did not change after 1 year, neither in untreated nor treated

patients (PI or non-PI). Baseline data are being compared to those observed in 51 non-HIV subjects matched for age, sex and BMI.

CONCLUSION: One year of PI combination therapy leads to a significant increase in fasting blood glucose, W/H ratio and LDL cholesterol that are not observed in the non-PI group. This delay could be too short to demonstrate the occurrence of insulin resistance according to the standard indices used. During the follow-up of untreated patients, the increase in hip circumference and the decrease in HDL cholesterol may suggest a specific role for HIV.

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2003-07-08
42

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