

POSTER PRESENTATION

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Human immunodeficiency virus infection and cardiovascular risk

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Background

Cardiovascular diseases are the second leading non-AIDS dependent cause of mortality for human immunodeficiency virus-infected (HIV) patients. Thus, the evaluation of cardiovascular risk factors (CVRF) and the identification of persons at risk are necessary for the implementation of prevention methods.

Methods

A retrospective cross-sectional study was performed on a group of 50 HIV patients at the I Clinic of Infectious Diseases Tg Mureş (33 male, average age: 27.1±7; average duration of antiretroviral treatment: 11.16±6.88 years; average TCD4+ lymphocyte (LTCD4+) count on last evaluation: 593.98±392.55 cells/µL; 38 in AIDS stage). From the moment of diagnosis until July 2014, several classic CVRF have been studied: age, sex, smoking, obesity, dyslipidemia, diabetes, hypertension and global cardiovascular risk (CVR) estimated with Framingham score. The results were correlated with: antiretroviral treatment (ART), the number of ART combinations, LTCD4+ and hepatitis B (HBV) coinfection. For statistical analysis the Student and Mann-Whitney tests were used with 95% confidence interval and statistical significance $p < 0.05$.

Results

CVRF: hypertriglyceridemia, 29 patients (22 in stage C), decreased high-density lipoproteins (HDL) 23 (elevated, 10), hypercholesterolemia 12, elevated low-density lipoprotein (LDL) 7, smoking habit 16, obese 3, overweight 5, underweight 8, hypertension 2, diabetes 1. The Framingham test global scores: 6 moderate, 1 elevated, 43

decreased. A significant statistical difference can be observed between the initial and final values of: total cholesterol (TC), LDL and triglycerides (TG) $p = 0.0002$, $p = 0.0495$, $p = 0.0002$. Patients with ≥ 3 combinations of ART had a significantly larger average value of TC, LDL and TG ($p = 0.030$, $p = 0.041$, $p = 0.027$) compared to those with 1 combination.

Significant statistical differences are registered between: average TC and TG values ($p = 0.0001$, $p = 0.0013$) depending on the treatment with or without protease inhibitors (PI); between HDL values for patients with LTCD4+ ≥ 500 cells/µL and those with TCD4+ < 500 cells/µL ($p = 0.028$). Average TG values were significantly higher for HBV coinfections ($p = 0.0349$).

Conclusion

The most frequent CVRF were: hypertriglyceridemia (58%), fall of HDL levels (46%), smoking (32%), hypercholesterolemia (24%), decreased LDL levels (14%). The lipid levels are influenced by: type of ART, number of combinations, presence of HBV and the advanced stage of disease. High levels of LTCD4+ and HDL can be considered protective factors. Because of the existence of these risks, the initiation of a program for the reduction of cardiovascular risks is necessary.

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