Poster presentation

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Factors related to low HDL-cholesterol in HIV-infected patients

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Purpose of the study

Low HDL-cholesterol (HDL-C) levels are associated with an increased risk of cardiovascular disease (CVD). The objective of this study was to investigate the prevalence of low HDL-C in HIV-infected patients and related factors.

Methods

Multicenter, cross-sectional study of all HIV-infected patients on regular follow-up in five Andalusian hospitals (southern Spain) during March–August 2007. A questionnaire about cardiovascular risk factors (CVR) and a physical exam, including anthropometric parameters and blood pressure, were done in all cases. Recent fasting lab data ($\leq$3 prior months) were available in all cases, which included lipid profile, glycaemia, CD4 cells count, and HIV viral load. Statistical analysis: SPSS 11.0.

Summary of results

Data are from 1,072 patients, 43.8% of whom had low HDL-C. The prevalence of low HDL-C was higher among patients diagnosed with AIDS than those without AIDS (47.7 vs. 41.1%; $p = 0.037$), those not on ART than those who were on ART (53.4 vs. 42.5; $p = 0.01$), those with detectable HIV viral load (55.2 vs. 40.2; $p < 0.0001$), with CD4 cell counts $\leq$350 cells/μL (53.9 vs. 40.1%; $p < 0.0001$), smokers than no smokers (46.8 vs. 38.8%; $p = 0.014$), and those with hypertriglyceridemia (58.6 vs. 34.3%; $p < 0.0001$). For patients on ART, the prevalence of low HDL-C was higher for those on PI than those taking NNRTI (52.1 vs. 31.4%; $p < 0.0001$). In the multivariate analysis, the following factors remained significant: tobacco use (OR 1.37, 95% CI 1,04–1.8; $p = 0.04$), hypertriglyceridemia (OR 2.94, 95% CI 2.2–3.8; $p < 0.00001$), CD4 cells count $\leq$350 cells/μL (OR 1.74, 95% CI 1.2–2.3; $p < 0.0001$), and detectable HIV viral load (OR 1.85, 95% CI 1.3–2.5; $p < 0.0001$).

Conclusion

Immunological and virological situation, in addition to traditional cardiovascular risk factors such as tobacco and hypertriglyceridemia, affect HDL-C levels in HIV-infected patients. For patients on ART, the use of PI is associated with a higher probability of low levels of HDL-C. Although it is not clear if the higher HDL-C levels associated with ART use are surrogates for decreased CVD risk, this may be another reason to start ART earlier.