HIV-induced hypertension may not be related to impaired glucose metabolism in Sub Saharan African patients on HAART: preliminary results from Cameroon

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Introduction

The advent of highly active antiretroviral therapy (HAART) has decreased the morbidity and mortality of HIV but has been associated, in some studies, with an increased metabolic burden and vascular injuries in Caucasians, Asians and people of African origin. However, there is now controversy surrounding the cardiometabolic consequences of HAART as it has been proven that HIV infection alone causes increased visceral fat accumulation, diabetes, insulin resistance and HIV-induced vasculopathy. In some case reports, early timing of HAART altered the evolution of the latter, which includes cerebrovascular injuries, peripheral vascular disease, aortic lesions, vasculitis and hypertension. We aimed here to evaluate the metabolic and vascular correlates of different durations of HAART in HIV-infected Cameroonian patients attending a certified HIV clinic in this self-resource limited area.

Methods

This is a single center cohort study carried out at the Yaoundé Central Hospital. We recruited 143 unselected, consecutive HIV-infected patients. Anthropometry, free fat mass (FFM, measured by bioimpedancemetry), lipid profile, fasting blood glucose (FBG), insulin sensitivity (measured using the short insulin tolerance test) and lipids levels were measured.

Results

Patients were 72% women distributed in 4 intervals of HAART duration: treatment-naïve (n=28), 1-13 months (n=44), 14-33 months (n=35) and 34-86 months (n=36). Their mean age was 39.5 (SD: 9.8 yrs) and 52% were on a stavudin-containing regimen. Systolic (p=0.04) and diastolic (p=0.03) blood pressures, and prevalence of hypertension (p=0.04) were significantly increased with HAART duration. While hypercholesterolemia (p=0.007), body mass index and waist to hip ratio (both $p = 0.02$) were also increased with HAART duration, FFM, triglycerides, FBG and insulin sensitivity were unaffected. In a small sized analysis, insulin-resistant patients (lower tertile of KITT) had lower BMI (p=0.009), FFM (p<0.01) and waist circumference than insulin-sensitive patients.

Discussion

Higher blood pressure levels are associated with HAART duration together with hypercholesterolemia, obesity and fat distribution. However, our study did not find a significant effect of HAART on FFM and glucose metabolism.
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Conflict of interest

None to declare