



POSTER PRESENTATION

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Hypertension and microalbuminuria in HIV infected patients: beneficial effects of the treatment with telmisartan

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Background

In HIV infected patients there is increasing evidence of hypertension and microalbuminuria, two important risk factors for renal and cardiovascular disease (CVD). Anti-hypertensive drugs inhibiting the renin-angiotensin system exert an antiproteinuric effect. Telmisartan, an angiotensin II receptor blocker partial agonist of the PPAR- γ approved for the treatment of hypertension, seems to exert a nephro-protective effect independent of blood pressure reduction in the general population. Aim of the study was to evaluate kidney-protective effects of telmisartan in hypertensive HIV+patients with microalbuminuria.

Methods

8 Caucasian male HIV+ patients cART treated without therapeutic changes for over 12 months and recent diagnosis of mild hypertension, were treated with telmisartan 80 mg daily. They had suppressed viremia and CD4 cell count > 300 cell/ml up on 6 month, and microalbuminuria >5 mg/l. Systolic (SBP) and diastolic (DBP) blood pressure, triglycerides (TGs), total cholesterol (TCh), HDL (HDL-C) and LDL (LDL-C) cholesterol, CRP, ESR, microalbuminuria, MDRD-GFR, cystatin-C, IL-18, VEGF and endothelin-1 were measured at baseline (T0), one (T1), three (T3) and six months (T6). All the statistical analysis was performed with the SPSS Advanced Statistical 7.5 Software.

Results

Treatment with telmisartan improved SBP and DBP values at T1 yet ($p = 0,001$). Microalbuminuria were

statistically decreased at T1 ($p = 0,006$) and further on T6 ($p = 0,0001$), whereas MDRD-GFR was statistically augmented ($p = 0,03$). Cystatin-C, endothelin-1 and VEGF were statistically reduced at T3 ($p = 0,0001$; $p = 0,01$ and $p = 0,0045$ respectively) and at T6. TG, TCh, LDL-C levels decreased with statistical significance at T6 ($p = 0,003$; $p = 0,03$ and $p = 0,02$ respectively), while HDL-C increased at T6 ($p = 0,04$). ESR, PCR and IL-18 decreased at T6 ($p = 0,04$; $p = 0,006$ and $p = 0,02$ respectively).

Discussion

Telmisartan was well tolerated and effective to improve hypertension and lipid metabolism. Decreased microalbuminuria and cystatin-C with increased MDRD-GFR are indicative of nephro-protective effects of telmisartan. Mechanisms causing microalbuminuria in HIV+ patients could be related to infection, chronic inflammation and endothelial dysfunction. Decreased endothelin-1 and VEGF in this study may be related to an endothelial protective effect of telmisartan. These data confirm renal and endothelial protective effects of telmisartan also in HIV+ patients.

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