Prevalence of Renal Dysfunction at 6- and 12 months after initiation of Tenofovir-containing Regimen in HIV- Infected adults at Themba Lethu Clinic, Johannesburg, South Africa.

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Introduction

Tenofovir disoproxil fumarate (TDF)-Containing antiretroviral therapy (ART) is effective forthe treatment of HIV-infected patients. However, it has adverse events such as renal dysfunction (RD); and only few studies were reported from South Africa. Therefore we aimed to assess the prevalence and risk factors of TDF-related RD at 6-12 months in HIV- positive patients in Johannesburg, from January 2010 to December 2015.

Methods

A retrospective record review of HIV-infected patients aged ≥18 years initiated on ART from January 2010 to December 2015 at Themba Lethu Clinic in Johannesburg, South Africa. The prevalence of patients with RD at 6-12 months in patients on TDF-based regimen was measured and compared to the proportion of RD in no TDF-based group using Chi-squared- test; and Multiple Logistic Regression was performed to investigate independent risk factors associated with RD.

Results

We included 732 adult patients, of which 643(87.8%) were on TDF-contained regimen, and69% were female. The prevalence of RD in TDF group with $eGFR>60\,ml/min/1.73m^2$ at baseline was 0.65% and 0.16% at 6 and 12 months respectively after treatment initiation.

Patients in no TDF group were more than 8 times likely to develop RD [95% Confidence Interval (CI) 3.17 to 22.97], P<0.001. Women were more than 2 times likely to have RD (95% CI .97 to 8.54), P= 0.057; and the risk of RD increased by 7.6% for every one year increase in age (odds ratio=1.076, 95% CI; 1.02 to 1.13), P=0.005. Among patients in TDFgroup, the risk of TDF-related RD slightly decreased by 9.9% with every one $cell/mm^3$ increase in CD4 count; and the risk of TDF-related RD increased by 0.6% with every one year increase in age.

Conclusion

The prevalence of RD associated with TDF was low at 6- and decreased further at 12-month follow-up in our study sample. Larger and long-term studies are needed to confirm these findings.