

Factors associated with dysglycemia and kidney dysfunction among people living with HIV on dolutegravir-based regimen in Mbarara city.

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ABSTRACT.

Background; Dolutegravir, a second-generation integrase strand transfer inhibitor (INSTIs) was recommended by WHO in 2017 due to high resistance threshold to efavirenz of more than 10 % in east and southern Africa. In 2018 Uganda adopted the use of tenofovir (TDF), lamivudine (3TC) and Dolutegravir as a first line drug for HIV patients and by 2021, more than 96% of patients on ART were enrolled to DTG based regimen. Land mark trials and studies have indicated that dolutegravir is associated with dysglycemia and people with hyperglycemia have an increased risk of developing kidney dysfunction.

Method; We carried a nested case control study from April to July 2023 in three HIV clinics of MRRH, TASO and Mbarara municipal health center IV. The main objectives of the study were to determine the factors associated with dysglycemia, establish if there is difference in kidney dysfunction between the cases and controls, and also determine factors associated with renal dysfunction.

Result; During the study period, 206 study participants (103 cases and 103 controls) were enrolled in the study. 66% were females the mean age was 54 yrs. for both cases and controls. 56.3% of the cases and 70.9% of the controls had attended primary education. Factors associated with dysglycemia were; comorbid hypertension (AOR 3.98 95% CI 1.07- 14.77, p-0.039), overweight (AOR 6.56 95% CI 1.62-26.55, p- 0.008), obesity (AOR 7.59 95% CI 1.33-43.67, p- 0.023) and lipodystrophy (AOR 4.76 95%CI 1.07 – 21.23, p- 0.041). 119 participants had renal dysfunction with UACR \geq 300mg/g of these 61.2% were cases and 54.4% were controls and the t test p- 0.7709.

Conclusion; Hypertension, overweight, obesity, and lipodystrophy are independent factors of dysglycemia. There was actually no difference in kidney dysfunction among the cases and controls, and this means that there are multiple factors responsible for renal dysfunction not hyperglycemia.