Virological monitoring of the switch from RAL-containing to DTG-containing regimens in Brazil: data from a real-world cohort

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Background

In January 2017, the Brazilian MoH recommended a switch from Raltegravir-containing (RAL-C) to Dolutegravir-containing (DTG-C) regimens for PLWHIV.

This study assessed virological effectiveness of the switch from RAL-C to DTG-C regimens in a real-life cohort within the Brazilian public health system and investigated factors associated with viral load suppression (VLS) following the switch.

Methods

We used programmatic individual-level information concerning 18+ PLWHIV viral loads (VL), CD4 counts and antiretroviral therapy (ART) with RAL-C regimens who switched to DTG-C in 2017. We assessed VLS comparing VL up to one year after the switch, as well as the time period between the switch and VL from zero to 270 days. Furthermore, we conducted uni and multivariable logistic regression to assess the association of demographics and clinical factors with VLS, among those who presented at least one VL measurement after switch.

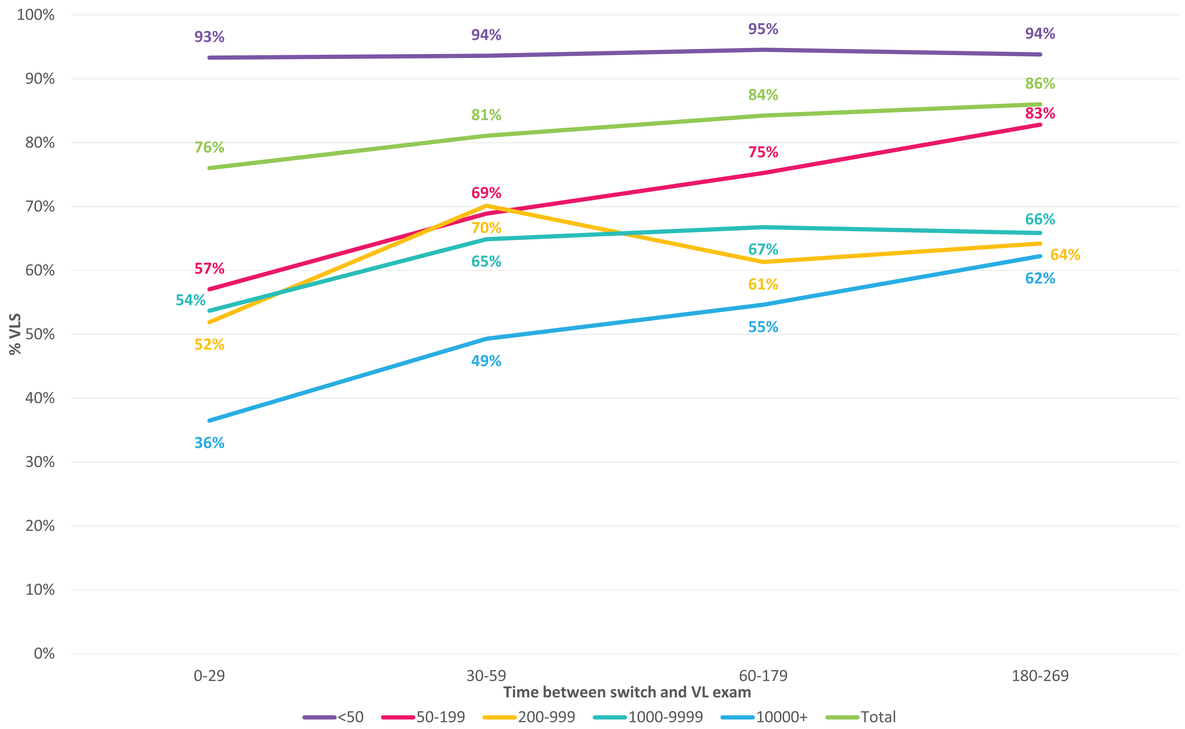
Results

A total 8,790 PLWHIV presented previous VL up to one year before the switch; among them, 5,970 regimens presented previous VL up to one year before the switch and a VL measurement at least one month after the switch and were included in the analysis. Overall, median age was 49yo (IQR=14); 62% men; 42% non-black; and an average ten years on ART.

Among those who switched and whose VL< 50 copies/mL, 94% sustained VLS during the follow-up period. The longer the use of the DTG-C regimen, the higher the VLS rates, even among those who switched with higher pre-switch VL (Fig.1).

Despite the association we observed in the univariable analysis for all variables, the multivariable analysis revealed that the following variables were positively associated with VLS: the older the PLWHIV (60+ aOR 3.3 95% CI=2.47-4.49, compared with the 15-24 age group); non-black ethnicity/color (aOR 1.36 95%CI=1.17-1.58, compared with black); and high CD4 count at baseline (500+ aOR 6.65 95%CI=5.32-8.39, compared with <100).

Percentage (%) of PLWHIV aged 18+ with viral load suppression after the switch from RAL-containing to DTG-containing regimens according to the time (i)



Conclusions

DTG-C regimen showed early VLS at switch in those with detectable VL – and VLS was sustained in those with an undetectable pre-switch VL. Hence, DTG-C is an effective choice for switch among PLWHIV using the RAL-C regimen. Finally, we concluded that this switch can be reproduced in other low or middle-income settings.

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