HIV Detectable Low-Level Viremia Suggests a Revised Threshold for Viral Suppression in Cameroon 00651

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BACKGROUND

- Transitioning to dolutegravir-based therapy in Cameroon has improved viral suppression (VS) rates, known as low-level viremia (LLV) <1000copies/ml;
- However, there is a growing number of patients experiencing VS with detectable LLV, indicating risk of virological failure;
- This study aimed to characterize the distribution of LLV and associated factors in the Cameroonian context

METHODS

- A laboratory-based study was conducted among treatment-experienced patients monitored for HIV plasma viral load (PVL) from January 2020 through April 2022 at the Chantal BIYA International Reference Centre (CIRCB), Yaoundé-Cameroon;
- PVL was measured using the Abbott m2000RT-PCR. Among patients with LLV, levels of PVL were stratified into 4 cut-points: <50, 50-200, 201-500, and 501-999 copies/ml, with p<0.05 considered statistically significant;

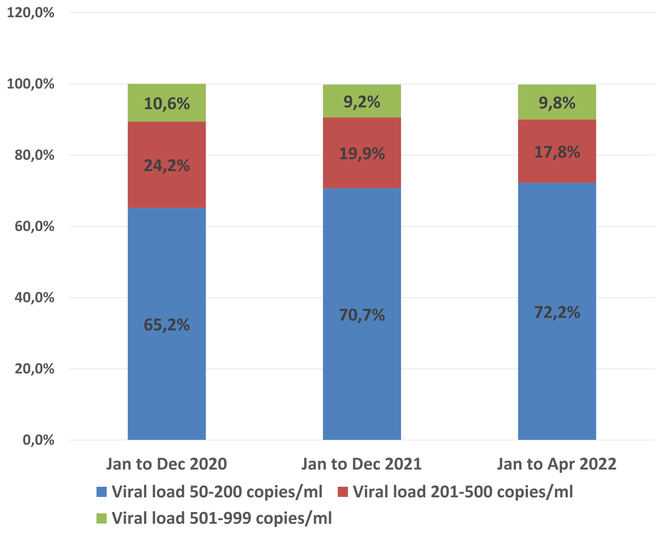


Figure 4 - Detectable low level viremia according to years

Significant increase proportion of patients with detectable Low level viremia (50-200 copies/ml) in Dolutegravir era in Cameroon, suggesting a revision of threshold for viral suppression at a maximum of 200 copies/ml

RESULTS

- Overall, 14970 patients were enrolled and median duration on ART was 36[27-39] months;
- By ART-regimens, 3411 were on NNRTI-based, 505 on PI/r-based and 11054 on DTG-based ART;
- Overall VS (<1000 copies/ml) rate was 88.8% (13291/14970) (95% CI: 88.2-89.3), and stratification in this population showed 1.5% (207/13291) with 501-999 copies/ml, 3.3% (445/13291) with 200-500 copies/ml, 10.8% (1439/13291) had 50-200 copies/ml, and 84.2% (11200/13291) with <50 copies/ml, p<0.0001.

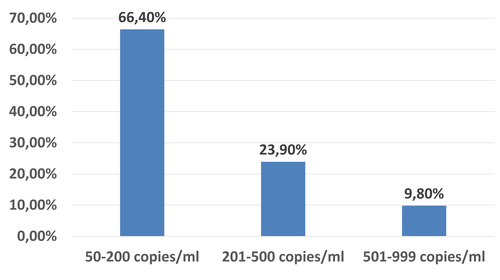


Figure 1 - Distribution of detectable low level viremia

➢Overall , 2091 (13.9%) had detectable low level viremia (50-999 copies/ml)

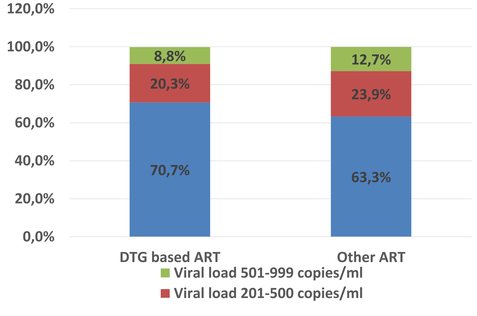


Figure 2 - Detectable low level viremia according to ART regimen

Detectable LLV (50-999copies/ml) was 13.9% (1540/11054) with DTG-containing versus 14.1% (551/3916) with other ART-regimens, p=0.81

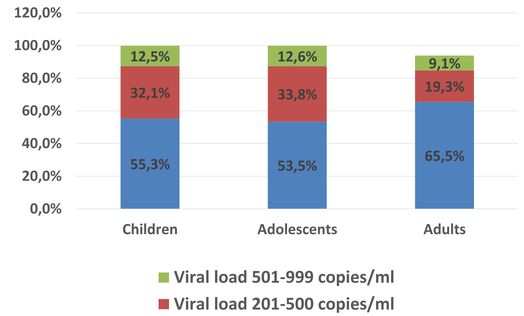


Figure 3 - Detectable low level viremia according to Age

. By age, detectable LLV was 13.8% among adults versus 16.9% children/adolescents, p=0.01

CONCLUSIONS

- Even though viral suppression rate appears encouraging, there is a significant increasing proportion of patients with detectable LLV in this DTG-era.
- Of note, LLV with 50-200 copies appears highly predominant, suggesting a revision of threshold for VS at a maximum of 200 copies/ml in resource-limited settings like Cameroon.

ADDITIONAL KEY INFORMATION

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