

HIV-1 viral decay in blood and semen in antiretroviral-naïve adults initiating dolutegravir/lamivudine versus bicitegravir/ emtricitabine/ tenofovir alafenamide



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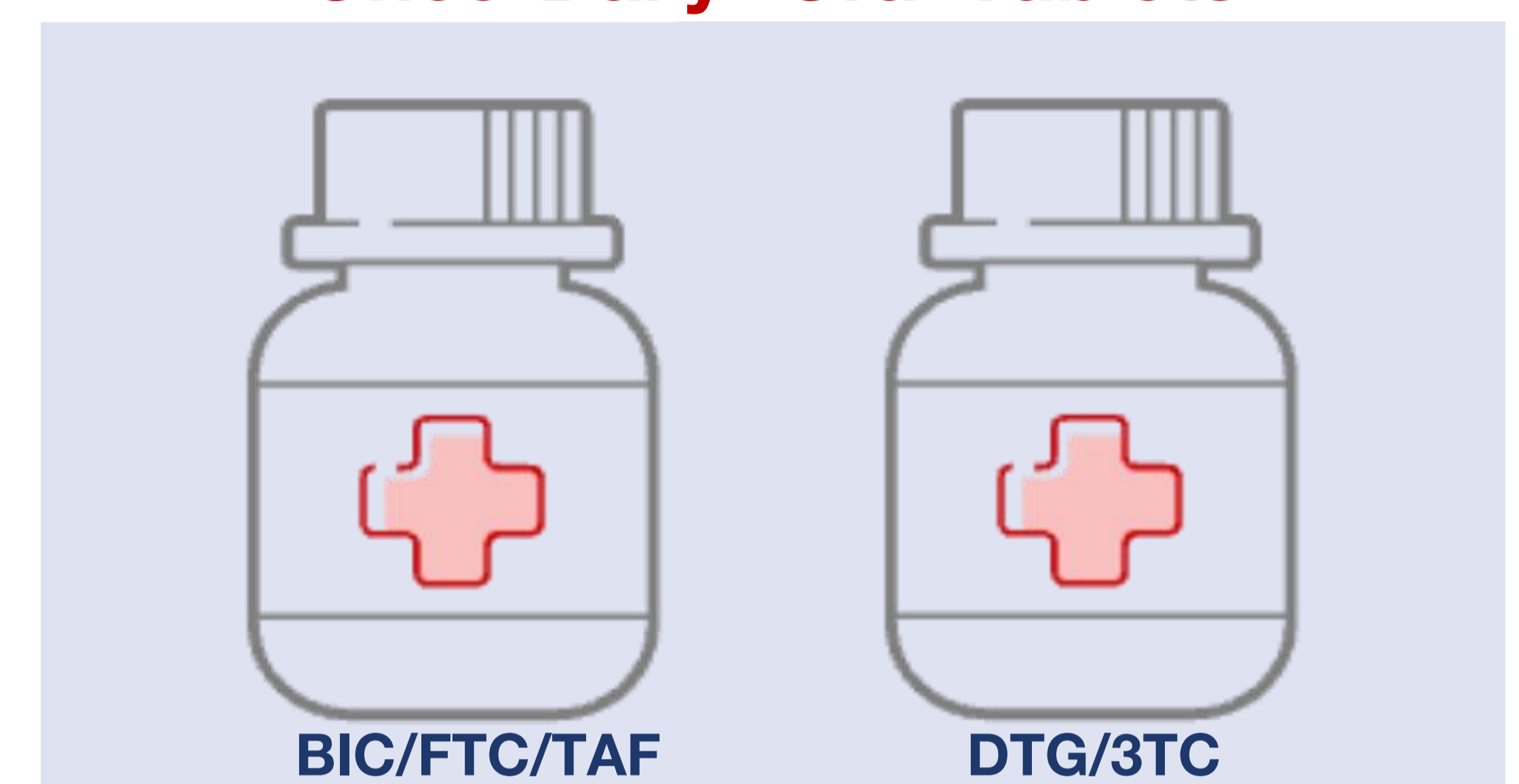
Background

Despite the Dolutegravir/Lamivudine (DTG/3TC) regimen has been recommended as first-line antiretroviral therapy (ART) regimen for ART-naïve people with HIV (PWH) by guidelines, the discussion on its efficacy, particularly regarding the viral decay and inflammatory changes in body fluids, compared with three-drug regimens is still ongoing. This study aimed to compare the decline in HIV-1 RNA in blood and semen, and differences in inflammatory biomarkers changes among ART-naïve PWH treated with DTG/3TC versus Bicitegravir/Emtricitabine/Tenofovir alafenamide (BIC/FTC/TAF), within a real-world clinical setting.

Methods

- This real-world study conducted in HIV/AIDS Clinic of Capital Medical University-affiliated Beijing Youan Hospital.
- Eligible participants were antiretroviral-naïve men who have sex with men (MSM), aged 18 years or older.
- Participants initiated once-daily ART with either BIC/FTC/TAF or DTG/3TC between May 2021 and September 2022.
- The study visits were scheduled at baseline, and weeks 4, 12, 24, and 48.

Once-Daily* Oral Tablets



Results

- Among the 100 patients in this study, 96 participants completed the 48-week follow-up (BIC/FTC/TAF, n=56; DTG/3TC, n=40).
- Viral suppression rates in BP and SP were comparable between BIC/FTC/TAF and DTG/3TC group in per-protocol analyses at week 48 (BP, 96.4% vs 100%, p=0.519; SP, 100% vs 100%, p>0.999).
- Both regimens demonstrated similar effectiveness in reducing HIV-1 RNA levels in blood (3.0 vs 3.1 log₁₀ copies/mL) and seminal plasma (0.9 vs 1.2 log₁₀ copies/mL)(Figure 1).
- There were no statistically significant differences in the changes of inflammatory biomarkers over the 48-week follow-up.

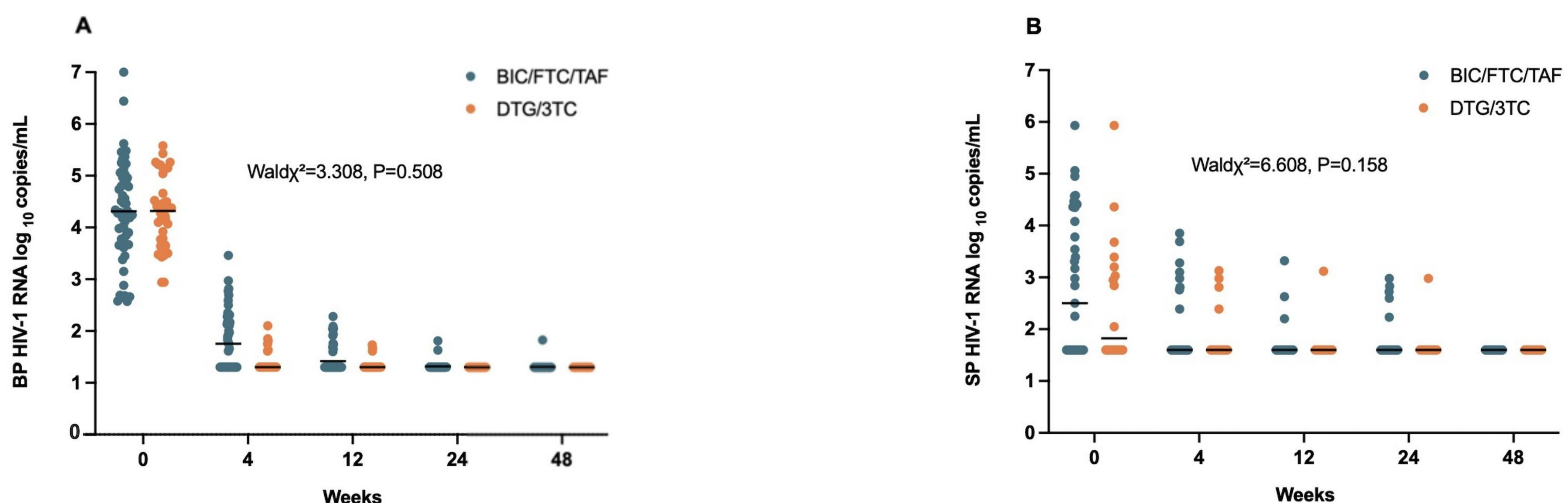


Figure 1. Dynamics of HIV-1 RNA in BP and SP

Conclusions

These findings suggested comparable effectiveness of DTG/3TC vs BIC/FTC/TAF in achieving viral suppression in BP and SP and similar changes of inflammatory biomarkers in BP.