P029

Impact of Adherence on Viral Suppression with Bictegravir- and Dolutegravir (DTG)-Containing Triple Therapy in Clinical Practice

Trio Health

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1. BACKGROUND

Clinical trials have shown comparable efficacy with DTG-containing triple therapy and BIC/FTC/TAF. Here we examine the impact of adherence on outcomes with these integrase inhibitors in US clinical practice.

2. METHODS

Using data from Trio Health HIV EMR and dispensing database, we retrospectively evaluated HIV suppression among stable patients switching to single-tablet BIC/FTC/TAF, DTG/3TC/ABC or DTG multi-tablet regimens (MTRs: DTG+FTC/TAF, DTG+FTC/TDF, DTG+3TC+ABC).

Eligibility criteria: HIV diagnosis, ≥18 years, suppressed (<200 copies/ml) at switch (-12 months up to +1 month), with viral load measurements at 6 months after switch, and ≥6 months observation prior to switch.

High adherence thresholds were defined as proportion of days covered (PDC) ≥80% and ≥95%. Univariate comparisons were conducted via chi-square for categorical and t-test for continuous variables. Negative binomial model with log link function evaluated association between high adherence level and viral suppression 6 months after switch accounting for gender, race, and CD4 at switch (baseline).

3. RESULTS

Of 2229 eligible patients, 1130 (51%) switched to BIC/FTC/TAF, 520 (23%) to DTG/3TC/ABC, and 579 (26%) to DTG MTRs [Figure 1].

Significant differences were observed among groups: male (75% BIC/FTC/TAF v. 81% DTG/3TC/ABC (p=0.014) v. 69% DTG MTR (p=0.006)), black race (25% BIC/FTC/TAF v. 33% DTG/3TC/ABC v. 36% DTG MTR, p<0.001), baseline CD4< 200 cells/µl (3% BIC/FTC/TAF v. 4% DTG/3TC/ABC (p=0.025) v. 6% DTG MTR (p=0.010)) [Table 1].

At 6 months after switch, patients on BIC/FTC/TAF were more adherent at PDC≥80% (77% v. 67% DTG/3TC/ABC v. 61% in DTG MTR, p<0.001) and PDC≥95% (53% v. 41% DTG/3TC/ABC v. 31% DTG MTR, p<0.001) [Figure 2].

Despite differences in adherence, viral suppression was similar between groups: 90% BIC/FTC/TAF v. 91% DTG/3TC/ABC (p=0.833) v. 90% DTG MTR (p=0.677) [Figure 3].

In adjusted models accounting for differences among groups at baseline, adherence was associated with viral suppression for DTG regimens but not for BIC/FTC/TAF. [Figure 4]

TABLE 1: BASELINE CHARACTERISTICS

n (%) unless specified		Treatment-experienced suppressed at switch with viral load measure at 6 months				
		A: DTG MTR n=579	B: DTG STR n=520	C: BIC/FTC/TAF n=1130	A vs C p-value	B vs C p-value
Age < 50		300 (52)	288 (55)	620 (55)		
Gender	Male	400 (69)	420 (81)	851 (75)	0.006	0.014
	Female	101 (17)	63 (12)	127 (11)	<0.001	
	Other	4 (1)	4 (1)	20 (2)		
	Unknown	74 (13)	33 (6)	132 (12)		<0.001
Race	White	306 (53)	287 (55)	677 (60)	0.005	
	Black	209 (36)	173 (33)	277 (25)	<0.001	<0.001
	Other	27 (5)	35 (7)	96 (8)	0.004	
	Unknown	37 (6)	25 (5)	80 (7)		
Baseline CD4 count <200 cells/µl		23 (6)	15 (4)	28 (3)	0.010	0.025

4. LIMITATIONS

Limitations of this study are typical of retrospective observational studies: patients were non-randomized, observers were non-blinded, and sample size was limited for some subgroups.

Data are limited to treatment centers captured in the Trio database and may not represent treatment patterns and patient characteristics in the entire US. All patients were treated at nationally qualified health centers.

5. CONCLUSION

At 6 months after switching to BIC/FTC/TAF or DTG-containing triple therapy in clinical practice, viral suppression was high and similar for all strategies. Patients switched to BIC/FTC/TAF had higher level of medication adherence. In DTG-based regimens, adherence level impacted viral suppression, whereas for BIC/FTC/TAF viral suppression was consistent across all adherence groups.

FIGURE 1: PATIENT DISTRIBUTION BY REGIMEN

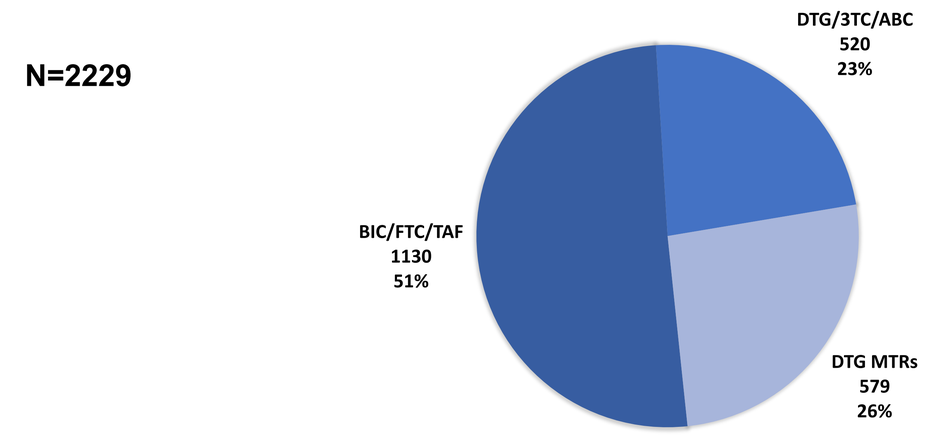


FIGURE 2: PROPORTION OF PATIENTS WITH HIGH ADHERENCE AT 6 MONTHS

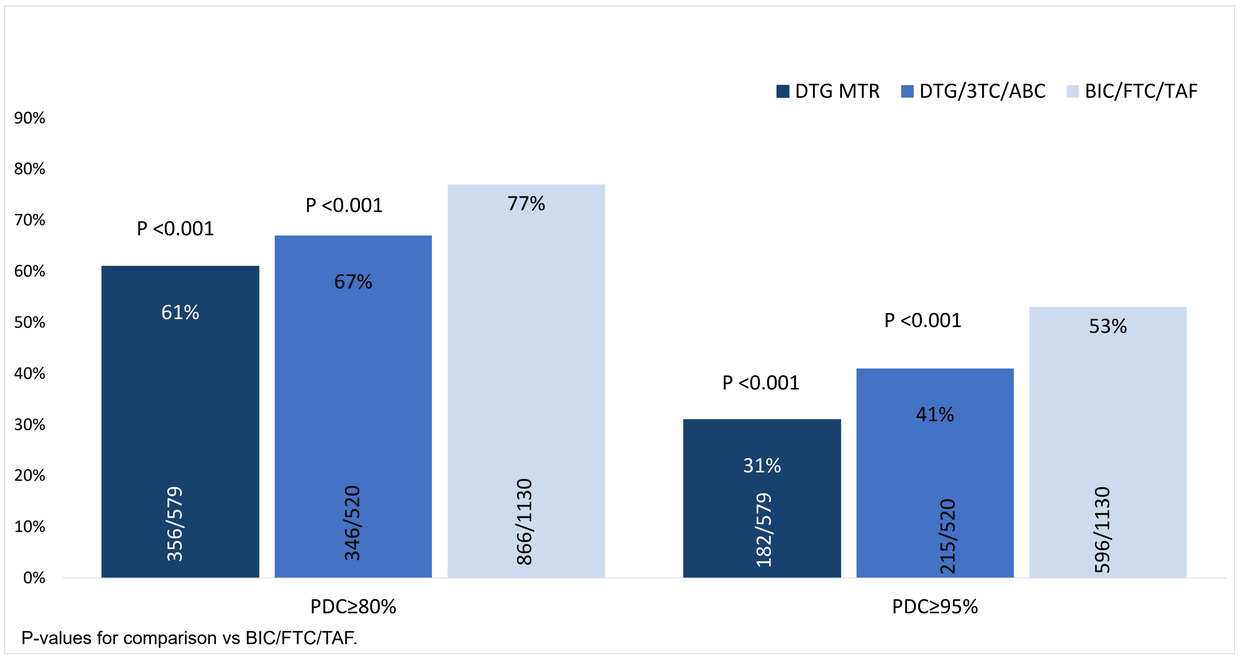


FIGURE 3: PROPORTION OF SUPPRESSED AT 6 MONTHS BY REGIMEN (UNADJUSTED)

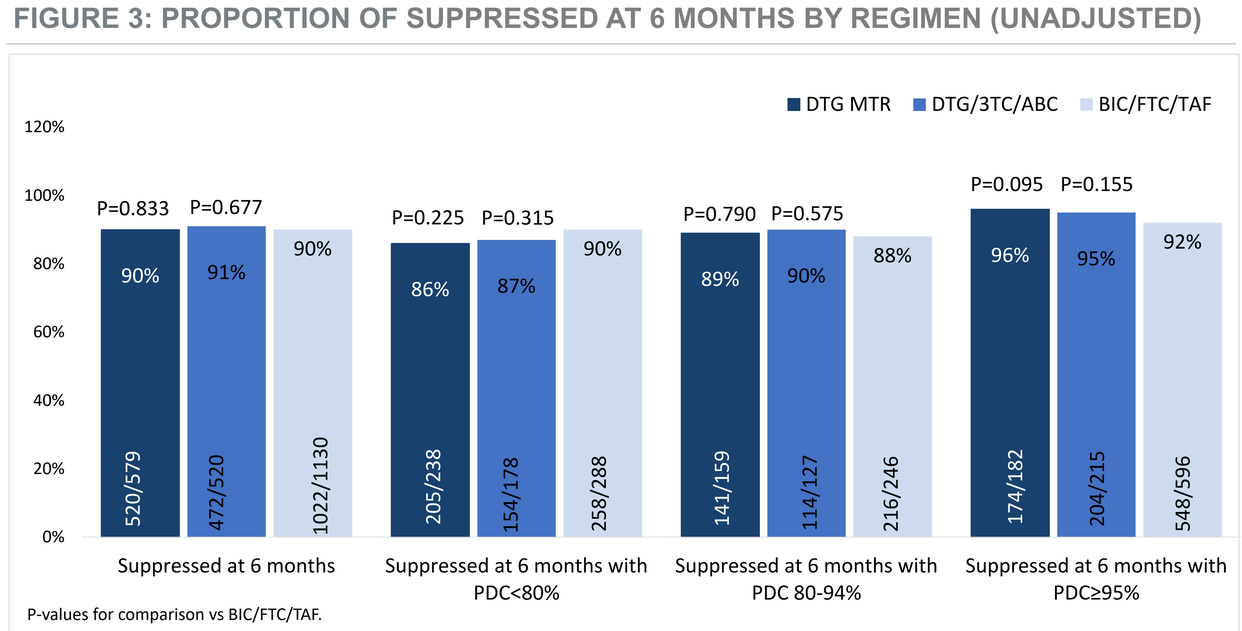
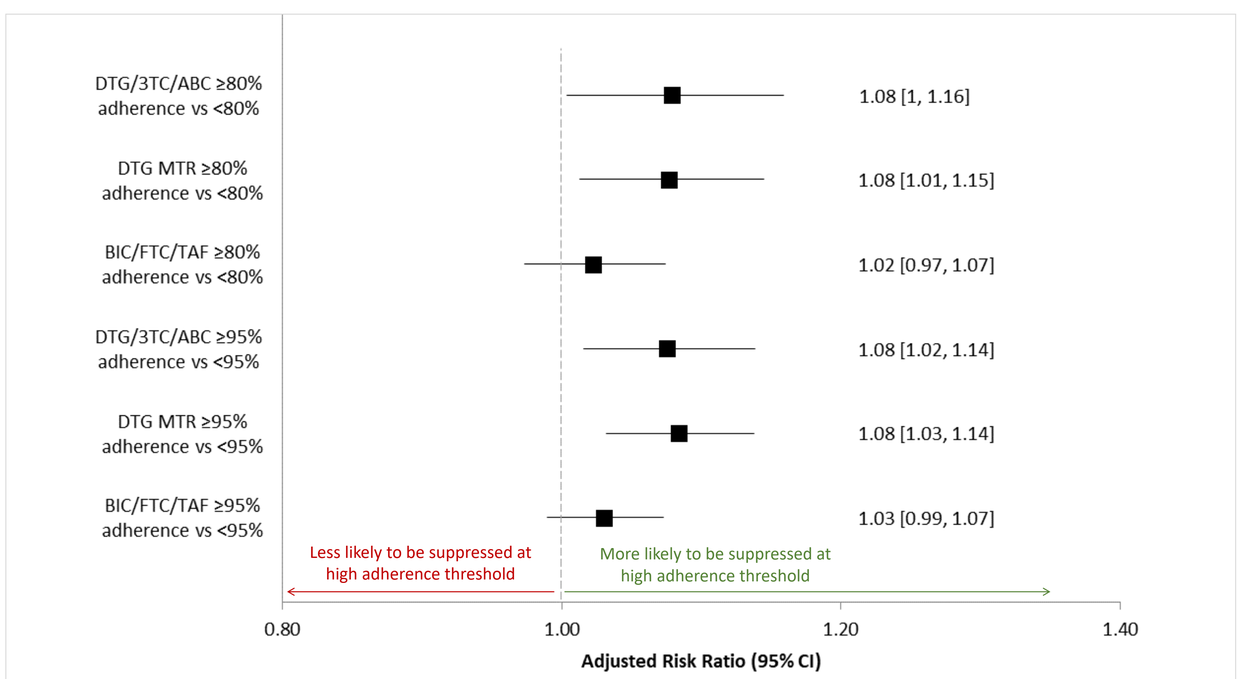


FIGURE 4: ESTIMATED EFFECTS OF ADHERENCE ON VIRAL SUPPRESSION AT 6 MONTHS FOR PDC≥95% AND ≥80% ADHERENCE THRESHOLDS



*Accounting for differences in baseline characteristics. Risk ratios describe likelihood of being suppressed if adherent on the regimen: <1 less likely to be suppressed when adherent, >1 more likely to be suppressed when adherent.

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