EFFECTIVENESS AND SAFETY ANALYSIS OF B/F/TAF FOR RAPID INITIATION OF THERAPY IN PEOPLE

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OBJECTIVE

Guidelines recommend rapid initiation of antiretroviral therapy (ART) for patients newly diagnosed with HIV-1 infection, but data in China is limited. This study aimed to evaluate the effectiveness, safety, and patient satisfaction of B/F/TAF for rapid initiation therapy in people with HIV (PWH).

METHODS

a) This is a single-center, retrospective cohort study which analyzed patients who initiate B/F/TAF therapy within 7 days of diagnosis at Chengdu Public Health Clinical Medical Center from May 2020 to January 2024. Baseline characteristics, HIV-1 RNA virological suppression rate, CD4+ T-cell count changes, safety, and patient satisfaction surveys were evaluated.

b) Data were obtained from the hospital information system of Chengdu Public Health Clinical Medical Center. The incidence of adverse events and patient satisfaction are obtained from the case record and telephone follow-up.

c) According to the type of data distribution, baseline data is expressed as mean ± standard deviation ($\bar{X}\pm S$) or median and interquartile range (M (Q1, Q3)). The continuous data was analyzed using t-test with a test level of $\alpha=0.05$ and a two-sided test. When $P<0.05$, the results were considered statistically significant.

N=196(male 160，female 36)

Data content	
• Baseline • 4 weeks • 24weeks	routine blood test
	Liver and kidney function
	blood lipid
	HIV-1 RNA viral load
	CD4+T lymphocyte count

Inclusion criteria:
1. Age>18 years old;
2. HIV-1 antibody positive;
3. The time from confirmation to initiation of antiviral regimen is less than or equal to 7 days;
4. The ART regimen is BIC/FTC/TAF.

Exclusion criteria:
1. Baseline CD4+count and HIV viral load were missing;
2. The HIV viral load data for both 4 and 24 weeks were missing;
3. Blood biochemical data for both 4 and 24 weeks were missing.

N=111(male 94，female 17)

RESULTS

● 111 patients were included with a median age of 39 (30,55) years. Median baseline HIV-1 RNA was 4.95(4.34，5.36) log10 copies/mL, the rate of HIV-1 RNA>100,000 was 46.8%. Median CD4+ T-cell count was 255 (141,376) cells/ul, with 36.0% having CD4<200 cells/ul. 8.1% of cases had HBV co-infection. Among them, 1 patient had missing biochemical indicators at 4 weeks.

● Median time from diagnosis to initiation of B/F/TAF was 4 (1,6) days and 25.2% of cases initiated therapy on the same day.

● The virological suppression rate, HIV-1 RNA<50 copies/mL, at 4 and 24 weeks were 64% (57/89) and 86.7% (91/105), respectively. At week 4, median decline of HIV-1 RNA was 4.84 log10 copies/mL.

● CD4+ T-cell counts significantly increased at 4 and 24 weeks ($P<0.001$), with median increases of 82.4 and 148.41 cells/μL from baseline, respectively.

● Discontinuation rate due to adverse events was 0%. 95% of patients were satisfied or extremely satisfied with B/F/TAF taking.

Table 1 Baseline information

Characteristics		$\bar{X}\pm S$	M	Q1	Q2
age		-	39.00	30.00	55.00
	male	-	37.00	29.00	50.25
	female	58.59±12.34	-	-	-
Start-up		-	4.00	1	6
CD4+（cells/ul）		-	255.00	141.00	376.00
SCR（μmol/ml）		70.76±13.20	-	-	-
HIVRNA（copies/ml））		-	89100	21800	23100

Table 2 CD4+ and CD4/CD8+ changes at 4 and 24 weeks*

Group		$\bar{X}\pm S$	t	P
Group 1（n=93）(CD4+)	4-week	358.69±206.31	6.40	<0.001
	Baseline	276.29±169.63		
Group2(n=93)(CD4+/CD8+)	4-week	0.43±0.25	5.92	<0.001
	Baseline	0.32±0.16		
Group 3(n=102)(CD4+)	24-week	432.21±208.36	12.72	<0.001
	Baseline	283.8±160.74		
Group4(n=102)(CD4+/CD8+)	24-week	0.63±0.41	8.89	<0.001
	Baseline	0.33±0.17		

*18 and 9 patients were missing above data for 4 weeks and 24 weeks respectively.

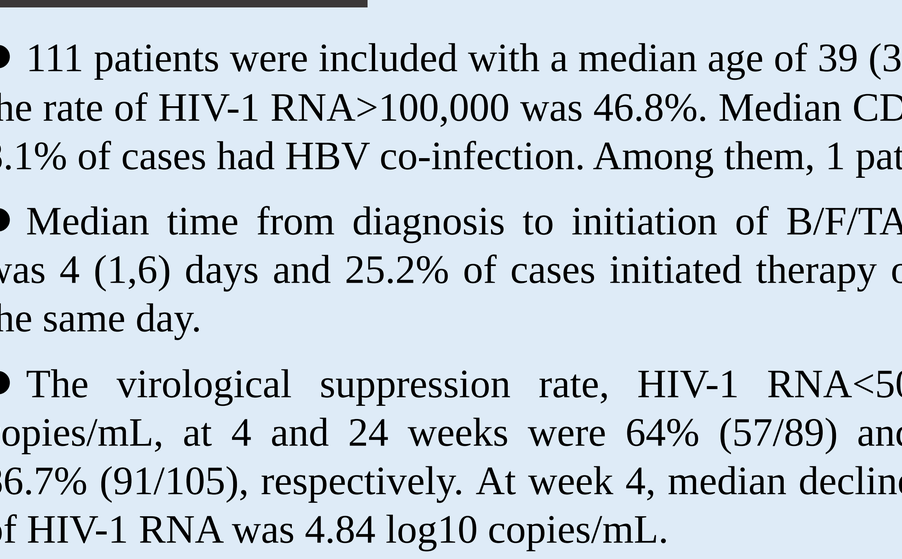

Figure 1 Virological suppression status#

#22 and 6 patients were missing HIV RNA data at 4 and 24 weeks, respectively

CONCLUSION

B/F/TAF has good virological suppression rate, immunologic reconstitution effect, safety and high patient treatment satisfaction. B/F/TAF could be a preferred regimen for rapid initiation of ART in PWH.

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