Real-world Study with Dolutegravir (DTG) plus Rilpivirine (RPV) as STR (JULUCA ©) in treatment experienced-HIV patients.

Hidalgo -Tenorio, Carmen; Garcia Vallecillos, Coral; Javier, Rosario; Lopez-Ruz, Miguel Angel; Sequera, Sergio; Pasquau, Juan HOSPITAL UNIVERSITARIO VIRGEN DE LAS NIEVES, INFECTIOUS DISEASES UNIT, GRANADA. Instituto de Investigación Biosanitario de Granada (IBS-Granada). Spain.

Background: Two-drugs regimen (2DR) in naive [DTG plus Lamivudine(3TC)] and treated experienced-HIV patients (DTG plus 3TC, DTG plus RPV, CAB(Cabotegravir) plus RPV) have been positioned as another strategy in clinical practice. Objectives: to analyse in real life the effectiveness of dual therapy (2DR) with JULUCA ©, and its effect on virological and immunological condition, lipid profile and inflammatory markers.

Patients/methods: 220 HIV pre-treated patients were included between 29/01/2019-2/02/2022. The subjects had changed their antiretroviral treatment (ART) to DTG 50mg plus RPV 25mg in STR at least 6 months ago, and after verbal informed consent. The study was approved by the ethics committee of the hospital.

Results

Table 1. Baseline data	N= 220
Age (year), mean (± SD)	51.3(±10.9)
Male, n (%)	155 (70.5)
Time from HIV diagnosis (year), median (IQR)	19.1 (11.6-27)
CD4 Nadir, cel/uL, mean (± SD)	285.4±202.4
Baseline VL < 50 copies/mL, n (%)	215 (97.7)
Viral Load HIV, log10, mean (± SD)	2.3 (3.32)
Baseline CD4, (Cel/uL), mean (± SD)	778.1 (±369.5)
Baseline CD4/CD8 quotient, mean (± SD)	0.98 (±0.59)
History of AIDS (A3, B3, C), n (%)	97 (45.3)
Virological failure previously, n (%)	32 (14.5)
HBV co-infection, n (%)	9 (4.1)
Cured HCV (IgG HCV positive), n (%)	54 (24.5)
History of ITD*, n (%)	29 (13.2)
Smoking, n (%)	115 (52.3)
Risk factor for HIV infection, n(%)	
- Heterosexual	54 (24.5)
- MSM	113 (51.4)
- Ex-IVDU**	48 (21.5)
- other	5 (2.3)
Previous lines of ART, median (IQR)	5 (4-8)
Time on ART (years), median (IQR)	16.5 (12-24)
Previous ART regimen, n (%)	
- 3DR	61 (27.7)
- 2DR	97(44.1)
- 1DR	62 (28.2)
Time (year) resistance test, median (IQR)	12 (IQR:7-16)

ITD*: infectious transmission diseases; 3DR: 3 drug regimen; 2DR: 2 drug regimen; Ex-IVDU**: ex-injecting venous drug user

Table1. Continued	N= 220
Number of patients with resistance to NNRTI, n(%)	12 (5.5)
NNRTI resistance mutations per patient	- Y 181C, V179I - K103N, E138A - Y181C, G190A, M184V - K103N, G190A, M184V - K103N, M184V, G190A - M184V, V106A, V 179D (2 patients) - M 184v, Y181C, V179I - K103N, V108I, Y181C - K101/E, G109A - K103N, M184V, P225H - K103N, V108I, M184I
Median time (months) RPV/DTG$_{STR}$ **administered**	23 (IQR:14 -28.5)
Reason for change to RPV/DTG$_{STR}$, n (%)	
- Simplification/Optimization	(61.4)
- Avoiding drug long-term toxicity	(34.3)
- Virological failure due to poor adherence to MTR	(2.9)

Table 4. Patients with Virological failure

PLHIV	Age (years)	Sex	Time from HIV diagnosis (years) CDC	Time on ART (years), Previous ART (months) Lines	Baseline VL	VL in VF	RS**	Month VF	Observations
1	59	M	28.7 y B3	27 y DRV/cob (49m) 8 lines	<50 cop/mL	173,000 cop/mL	NA	3 m	Abandoned ARV and follow-up
2	57	F	33.3 y B2	26 y EVG/c/TAF/ FTC (27m) 14 lines	25,700 cop/mL	122,200 cop/mL	NA	19	Poor adherence

RS**: resistance study; VF: virological failure; NA: not available

Tabla 2. Outcomes	n=220
Effectiveness: VL<50 cop/mL, n (%)	
- Intention-to treat analysis (ITT)	**217 (98.6)**
- Observed data analysis (IOT)	**218 (99,1)**
Blips, n (%)	3 (1.4)
Virological failure, n (%)	2(0.9)
Changed 2DR to avoid adverse events, n (%)	1(0.5)

Table 5. Analytical changes	Baseline	Last Visit	P value
CD4/CD8 ratio, mean ± SD	0.98±0.59	1.01±0.54	0.002
Clearance creatinine, ml/h, mean± SD	128.3±536.2	163.5±787.8	0.016
TC/HDL ratio, mean ± SD	4.04±1.06	3.62±0.89	0.048
Triglycerides (mg/dL), mean ± SD	131.4±75.9	116.6±71.4	0.0001
Bilirubin (mg/dL), mean ± SD	1.6±11.2	1.1±6.6	0.22
GPT (UI/dL), mean ± SD	25.3±17.3	29.3±26.9	0.0001
GGT (UI/dL), mean ± SD	36.6±44.6	36.1±63.4	0.479
FA (UI/dL), mean ± SD	76.3±25.6	74.2±24.1	0.08
Interleukin-6, mean ± SD	4.6±6.6	4.3±3.7	0.72
Dímero D, mean ± SD	0.37±0.44	0.41±0.64	0.46
Fibrinógeno, mg/dL, mean ± SD	324.6±86	317.5±84.5	0.68
PCR, mg/dL	6.5±20.7	5.7±26.7	0.08

Conclusions: Switching to DTG plus RPV in STR in treatment experienced-HIV-patients is an effectiveness strategy, with a favourable lipid profile, which does not influence the inflammatory markers.