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SWITCHING TO LONG ACTING INTRAMUSCULAR CABOTEGRAVIR AND RILPIVIRINE IN VIROLOGICALLY SUPPRESSED PLHIV TREATED WITH DOLUTEGRAVIR/RILPIVIRINE. A SUBESTUDY FROM THE RELATIVITY COHORT

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BACKGROUND

Cabotegravir and Rilpivirine (CAB+RPV) is the first long-acting injectable (LAI) treatment approved for people living with HIV (PLWH). It is indicated in patients with undetectable viral load, without evidence or suspected resistance to CAB+RPV. Dolutegravir/Rilpivirine (DTG+RPV) is similar to CAB+RPV and has been used in real life as oral lead-in before starting LAI.

MATERIAL AND METHODS

The RELATIVITY cohort is a multicentre, non-controlled, ambispective study on HIV virologically suppressed individuals who switched to LAI CAB+RPV. We analysed the characteristics of the patients who were on treatment with DTG+RPV prior to the switch. Additionally, patients were compared based on prior knowledge of their genotype. Quantitative variables were contrasted using T-Student and U-Mann-Whitney tests; categorical variables were compared using Chi-Square and Fisher's Exact tests.

RESULTS

A total of 313 individuals from 30 hospitals in Spain were analysed, representing 22.9% of the Relativity cohort, which comprised 1366 individuals. Median follow-up was 7.9 [IQR:5.2-11.5] months. 83.3% were male. The most common transmission route was GBMSM (57.8%), followed by HTX (24.9%). AIDS prevalence was 11.4%. The most frequent comorbidities were dyslipidaemia (24.3%), hypertension (9.3%), and psychiatric disorders (8.3%). Previous genotyping was available in 44.4% (134/313) of cases: 13/134 presented NNTRI mutations. Patients with known genotype tended to be younger (46.2 [40.0, 54.0] vs. 49.8 [40.0, 58.0]; p-value = 0.080) and Spanish instead of foreigners (84.3%. vs 70.7%, p-value = 0.009). Prior virological failure (VF) was more common when previous genotype was available (8.5% vs. 5.5%; p-value = 0.029). Time on ART was similar on both groups (11.0 [8.0 - 17.0] years on ART). Patients decided to switch regimens for convenience or improve quality of life (52.1%), personal request (28.4%), simplification (25.9%), and malabsorption (8.0%) [more frequent reason (12.7%) among patients with known genotype (p-value = 0.023)]. Eleven patients discontinued treatment: two due to systemic adverse effects and only one due VF (known genotype group).

	Known genotype 126	Genotype not known 162	p-value
Demographic data			
Age (years), median [IQR]	46.1 [40.0, 54.8]	50.0 [40.0, 58.0]	0,061
Body Mass Index (Kg/m2), median [IQR]	25.4 [22.4, 28.2]	24.4 [22.8, 27.0]	0,188
Female, n (%)	18 (14.3)	29 (17.9)	0,426
Male, n (%)	108 (85.7)	132 (81.5)	1
Male Transsexual, n (%)	0 (0.0)	0 (0.0)	1
Female Transsexual, n (%)	0 (0.0)	1 (0.6)	1
Country of origin, n (%) **Spain**	106 (84.1)	112 (70.9)	**0,011**
Migrants	20 (15.9)	46 (29.1)	**0,011**
Latin America	13 (68.4)	37 (80.4)	0,745
Africa	0 (0.0)	2 (4.3)	1
Central Europe	0 (0.0)	1 (2.2)	1
Occidental Europe	1 (5.3)	3 (6.5)	1
East Europe	5 (26.3)	2 (4.3)	**0,027**
Asia	0 (0.0)	1 (2.2)	1
Transmission route			
Transmission route, n (%) **GBMSM**	65 (54.2)	89 (58.9)	0,382
HTX	34 (28.3)	35 (23.2)	0,265
PID	10 (8.3)	18 (11.9)	0,677
HIV Data			
CD4 nadir (cells/mm3), median [IQR]	295.0 [190.0, 444.0]	299.0 [133.0, 420.0]	0,432
Viral Load (copies/ml) **at diagnosis** (median [IQR])	52200.0 [23905.2, 137375.0]	48000.0 [6961.2, 155445.0]	0,312
Months from diagnosis to initiation of first ART (median [IQR])	2.0 [0.5, 20.0]	3.0 [1.0, 24.0]	0,172
AIDS, n (%)	13 (10.7)	21 (13.3)	0,646
Years of ART from initiation of treatment to initiation of CBG/RPV (median [IQR])	10.5 [8.5, 13.8]	11.0 [7.2, 19.0]	0,435
Months from undetectability to initiation of CAB+RPV (median [IQR])	105.0 [67.0, 132.0]	115.0 [68.0, 168.0]	0,063
Previous virologic failure (%)	10 (8.2)	9 (5.7)	**0,037**

Table 1:Comparative analysis of the baseline characteristics of patients living with HIV on treatment with DTG+RPV who switched to CAB+RPV LAI with or without data of previous genotype

Genotype	
Basal genotype type B, n (%)	58 (81.7)
A1/A2, n (%)	1 (1.4)
F/CRF, n (%)	1 (1.4)
other, n (%)	11 (15.5)
Mutations	
Wild type without mutations, n (%)	80 (63.5)
Mutations in IT analog resistance, n (%)	15 (11.9)
184V, n (%)	2 (1.6)
Other, n (%)	16 (12.7)
Mutations in IT resistance to non-analogs, n (%)	12 (9.5)
K103N, n (%)	9 (7.1)
E138A, n (%)	0 (0.0)
Other, n (%)	9 (7.1)
Mutations in integrase, n (%)	0 (0.0)

Table 2. basal genotype

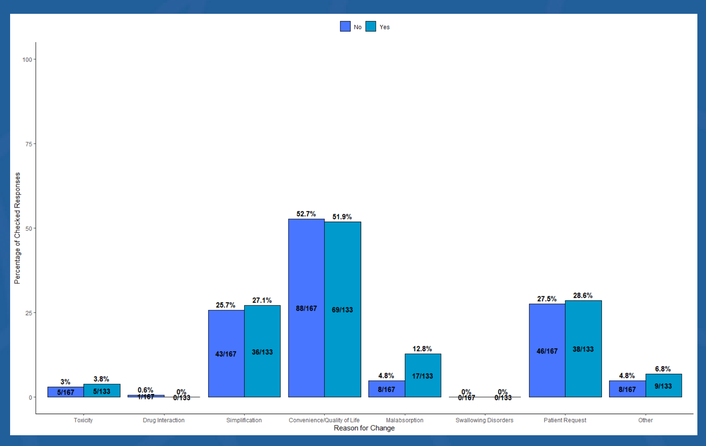

Figure 1:- Reasons for switching to CAB+RPV

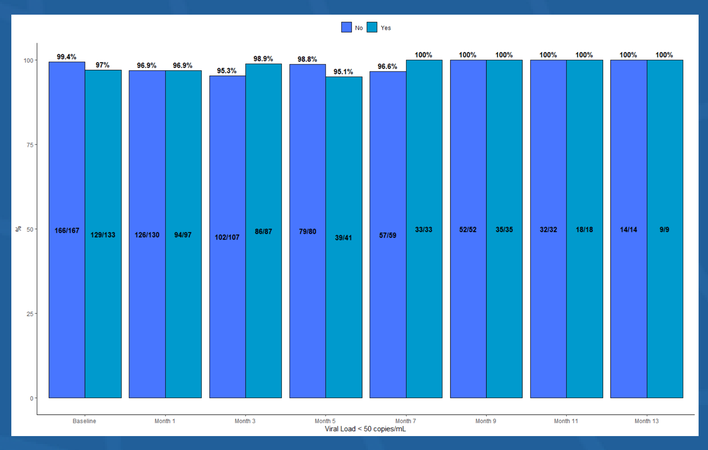

Figura 2: percentage of patients with and wihout previous genotype vith VL<50 cp/ml during follow-up

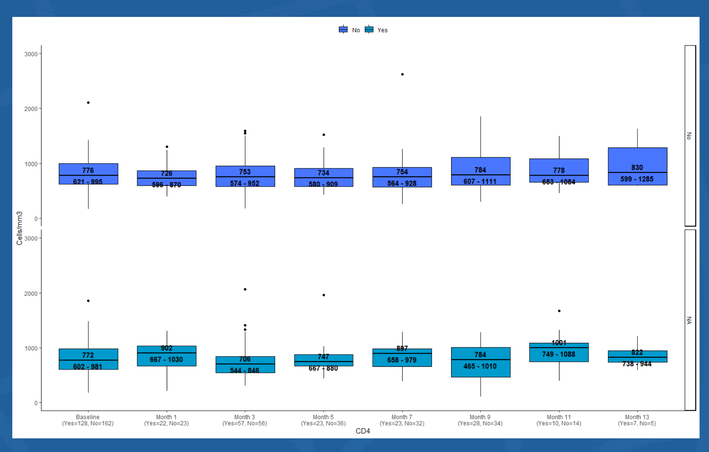

Figure 3: evolution of CD4 during the follow-up

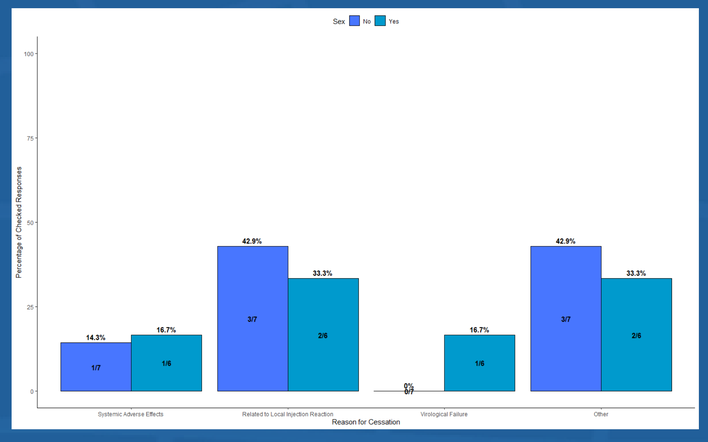

Figure 4: reasons to switch from CAB+RPV LAI to other options in patients with or without previous genotype

No Yes

Yes: genotype available; no: no genotype

CONCLUSIONS

In real life settings, switching from DTG+RPV to CAB+RPV is safe and well tolerated. Our results suggest that in virologically suppressed PLHIV under treatment with DTG/RPV, previous genotyping results might not be necessary in order to switch to CBG/RPV

RELATIVITY