

Doravirine used as a fixed combination doravirine/lamivudine/tenofovir disoproxil, among persons living with HIV at switch and start: real-life data from the Croatian HIV cohort

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Background

Delstrigo (doravirine/lamivudine /tenofovir disoproxil) is a recommended first-line antiretroviral (ART) regimen in the European AIDS Clinical Society (EACS) guidelines. It became available in Croatia in August 2020 (only as a fixed combination). This retrospective cohort study evaluated persons living with HIV (PLWH), ART naïve or experienced, who initiated or switched to Delstrigo, in Croatia. Croatia has centralized care for PLWH and all patients are seen and get treatment in a single centre.

Materials and Methods

We collected information from the electronic database of the Croatian HIV Reference Centre and identified 90 PLWH who started Delstrigo from August/2020 until December/2021. Excluded from the analysis were 3 PLWH who started Delstrigo as a part of non-standard regimens and 3 PLWH who started Delstrigo after a discontinuation of a previous ART regimen for >1 month. We analysed 84 PLWH, 59 who switched to Delstrigo, and 25 who were ART naïve. The follow-up was minimum 5 months (latest 31st of May 2022) and demographical data and other relevant information regarding HIV history and switches were extrapolated. The data are presented by frequencies and percentages or median with interquartile range (IQR).

Results

All PLWH in our analysis were men, 77 (91.7%) were MSM. The median age of those who switched to Delstrigo was 45.0 (IQR 38,7-52,5) years; 10 (16.9%) had previously clinical AIDS; median time from HIV diagnosis was 9.1 (IQR 5.2-14.2) years; median time on ART was 8.6 (IQR 5.1-12,5) years (Table 1.). PLWH switched from various ART regimens; 34 from non-nucleoside reverse transcriptase inhibitors (NNRTI), 13 from protease inhibitors (PI) and 12 from integrase strand inhibitors (INSTI) based regimens (Table 2.). Before switch 57 PLWH had an undetectable viral load and 2 had low-level viremia. During follow-up only 1 PLWH had low-level viremia (<200 c/ml). Among PLWH who switched to Delstrigo serum lipid parameters declined: total median cholesterol, low-density lipoprotein cholesterol, and triglycerides (Table 3.). The median age of 25 naïve PLWH was 36.8 (IQR 31.3-38.7) years; two had clinical AIDS (Table 1.). After 60-120 days of follow-up, 9 PLWH were undetectable, 9 PLWH had low-level viremia (<200 c/ml) and 3 PLWH had detectable viremia (240, 410, and 1129 c/ml respectively). The data on viremia for naïve PLWH starting Delstrigo (where available) were presented after 15-60, 61-120 and 150-240 days (Figure). A total of 5 of 84 (6.0%, 4 naïve, 1 experienced) PLWH discontinued Delstrigo, 2 for gastrointestinal side-effects, 2 for other reasons, and one due to drug interactions. There were no discontinuations because of virologic failure.

Table 1. Baseline demographics and data on the course of HIV infection among naïve and switch patients who started Delstrigo in Croatia between 8/2020 and 12/2021 (N=84)

	Naïve N=25	Switch N=59	Total N=84
Male gender	25	59	84
Age, years			
Median (IQR)	36.8 (31.3 – 38.7)	45.0 (38.7 – 52.5)	42.0 (36.5 – 50.3)
Age categories			
<50 years	23 (92.0%)	38 (64.4%)	61 (72.6%)
>50 years	2 (8.0%)	21 (35.6%)	23 (27.4%)
Clinical AIDS			
Yes	2 (8.0%)	10 (16.9%)	12 (14.3%)
No	23 (92.0%)	49 (83.1%)	72 (85.7%)
CD4 T cells per /µl ^a			
Median (IQR)	403 (284-566)	693 (565.5-1014)	NA
Plasma HIV-1 RNA, copies/ml			
Median (IQR)	28400 (11800-184528)	b	NA
Mode of HIV acquisition			
MSM	25 (100%)	52 (88.1%)	77 (91.7%)
Heterosexual	0 (0.0%)	04 (6.8%)	4 (4.8%)
Other/unknown	0 (0.0%)	03 (5.1%)	03 (3.6%)
Known duration of HIV infection, years			
Median (IQR)	0.0 (0.0-0.1)	9.1 (5,2-14,2)	NA
Duration of ART, years			
Median (IQR)	0.0 (0.0 – 0.1)	8.6 (5.1 – 12.5)	NA

^aAt initiation of Delstrigo ^b57 participants had an undetectable viral load, 2 had low level viremia (156 and 230 copies/ml)
NA - not applicable

Table 2. Antiretroviral therapy (ART) prior to switch to "Delstrigo"

Switch from ART	Number of PLWH	%
ABC/3TC/EFV	14	23.7
TDF/FTC/NVP	11	18.6
ABC/3TC/NVP	7	11.9
TDF/FTC/RAL	6	10.1
TDF/FTC/LOP/r	5	8.5
ABC/3TC/DTG	2	3.4
ABC/3TC/DRV/c	2	3.4
TAF/FTC/BIC	2	3.4
TDF/FTC/DTG	2	3.4
TDF/FTC/EFV	2	3.4
ABC/3TC/LOP/r	2	3.4
DRV/r	1	1.7
TDF/FTC/DRV/c	1	1.7
TDF/FTC/DRV/r	1	1.7
ABC/3TC/DRV/r	1	1.7
TOTAL	59	100%

ABC-abacavir, 3TC – lamivudine, DRV/r – darunavir with ritonavir, EFV – efavirenz, LOP/r – lopinavir with ritonavir, NVP – nevirapine, DRV/c – darunavir with cobicistat, TAF – tenofovir alafenamide, FTC – emtricitabine, BIC – bictegravir, TDF – tenofovir disoproxil fumarate, DTG – dolutegravir, RAL – raltegravir

Table 3. Lipids before and after in switch patients who started Delstrigo between 8/2020 and 12/2021 (N=59)

	Cholesterol	HDL-C	LDL-C	Triglycerides
Before switch				
Median (IQR)	5.8 (4.7-6.8)	1.3 (1.1-1.4)	3.6 (2.8-4.5)	1.9 (1.1-2.6)
After switch				
Median (IQR)	4.7 (3.9-5.2)	1.2 (1.0-1.3)	3.1 (2.4-3.6)	1.2 (0.8-2.0)

HDL-C = high density lipoprotein cholesterol, LDL-C = low density lipoprotein cholesterol

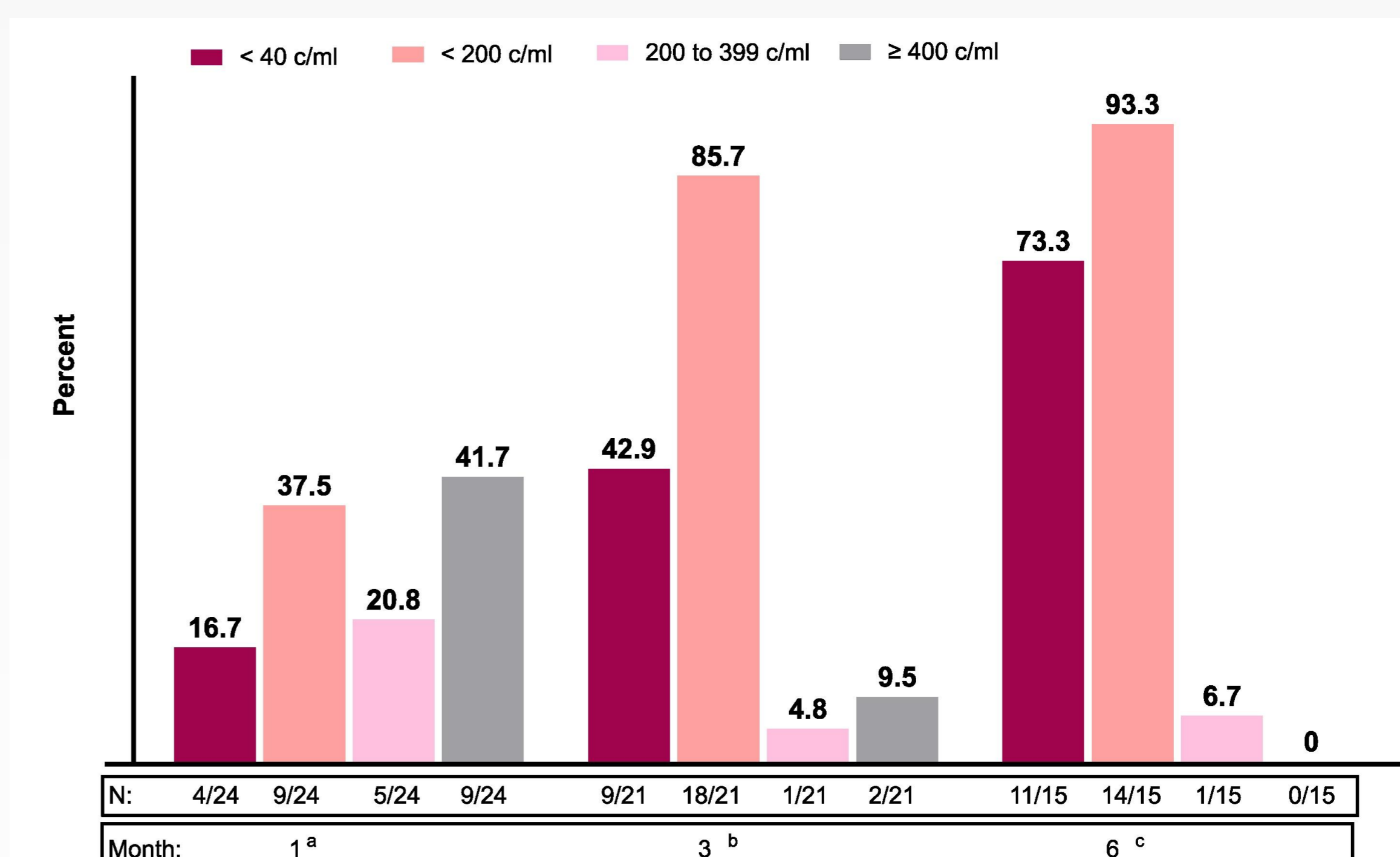


Figure. Plasma HIV-1 RNA on follow up in ART naïve PLWH who started Delstrigo in Croatia between 8/2020 and 12/2021 (N=25).
^a15 to 60 days, ^b61 to 120 days, ^c150 to 210 days. PLWH, people living with HIV.

Conclusion

In our real-life setting treatment with Delstrigo was virologically successful and well tolerated both as a switch strategy or as a first-line regimen. Our experience suggests that Delstrigo represents a potential treatment option for treatment-naïve PLWH or those in whom a switch from an old antiretroviral regimen is planned.