Real world data of doravirine usage: efficacy and safety outcomes in a large urban HIV service

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Background

- Doravirine was commissioned for use by NHSE in 2019 for the treatment of people living with HIV-1 (PLWH) with no prior evidence of NNRTI resistance.
- We aim to explore real world data of doravirine in an inner city London HIV clinic including efficacy and safety outcomes.

Method

- A retrospective observational study was conducted using electronic medical records with all PLWH prescribed doravirine since 2019.
- Patients were excluded if they switched to doravirine as part of a clinical trial or if they transferred their care already on doravirine.

Results

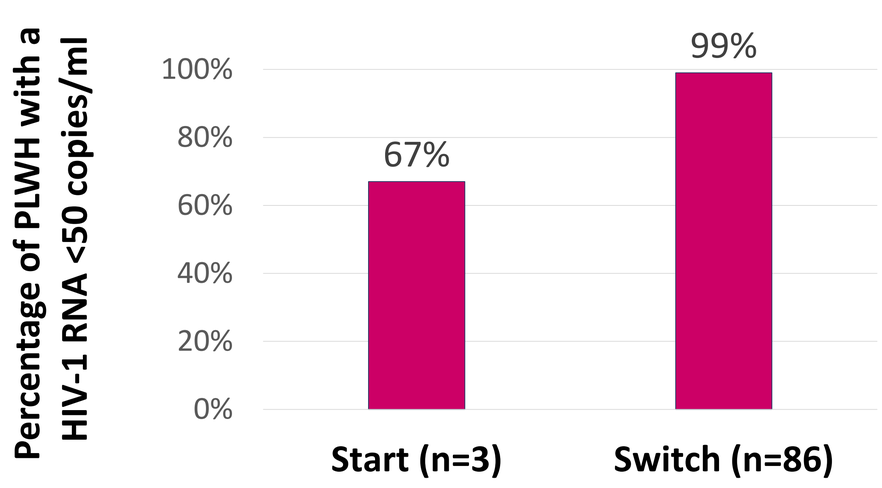
- 131 PLWH were identified on doravirine:
  - 125 switched – with 93 (71%) most commonly to Delstrigo
  - 6 newly started
- Most common previous ART regimen prior to switch (n=125):
  - NNRTI – 42 (33%)
  - PI – 41 (33%)
  - 2nd gen INSTI (BIC or DTG) – 21 (17%)
  - 1st gen INSTI (RAL) – 17 (14%)
  - Other – 4 (3%)
- Most common reason for switch (n=125):
  - CNS disturbance – 39 (31%)
  - Simplification to an STR – 25 (20%)
  - Drug-drug interactions – 18 (14%)
  - Weight gain – 17 (14%)
  - Other – 26 (21%)

Table 1: Baseline characteristics	(n=131)
Sex, n (%)	94 Male (72%), 37 Female (28%)
Median age, years	48 yrs
Ethnicity Black – Caribbean, African, British or other White – British, Irish or other Not known Other	 45 44 23 19
Mean number of years living with HIV	11 yrs
Mean Nadir CD4 (cells/µL)	367
Mean baseline viral load (copies/ml)	468,678
Mean length of exposure on doravirine	9 months
Mean CD4 count at time of doravirine initiation (cells/µL)	622

<u>Virological outcomes</u>

- 85/86 suppressed after switching and 2/3 after starting. Data missing for 42 patients was due to lost to follow up (LTFU), deferred monitoring during COVID or not having reached 24 weeks follow up yet.
- All people that remain on doravirine are undetectable except 4 LTFU and 1 new start who is yet to suppress after 4 months but has achieved a 3 log viral load reduction. 5 people had a viral load blip (VL>200copies/ml) of which all re-suppressed and none developed resistance.

Figure 1: Virological outcomes at week 24



<u>Tolerability</u>

- 52 people reported a total of 75 side effects, most commonly reported shown in table 2.
- 15 people discontinued mainly due to CNS toxicity; 9 switching to alternative ART and 6 back to their pre-switch ART.
- 13 people had an asymptomatic ALT rise up to 2x the upper limit of which 10 resolved with no intervention, 1 resolved after switching ART, all within a median time of 2 months. 2 remain persistently raised and are being actively follow up; 1 diagnosed with fatty liver and the other with gallbladder polyps.
- 29 people gained a median weight of 4kg, conversely 29 people lost a median weight of 3kg.

Table 2: Most commonly reported side effects	Median time to side effect	Outcome
Vivid dreams n=15	2 weeks	*54% - resolved* *20% - persisted – not distressing* *13% - switched back to old ART* *13% - switched to alternative ART*
Insomnia n=10	3 weeks	*80% - resolved* *20% - persisted**
Headache n=10	3 weeks	*60% - resolved* *30% - switched back to old ART* *10% - long standing**
Fatigue n=8	3 weeks	*63% - resolved* *25% - switched to alternative ART* *12% - switched to old ART*

*some side effects were noted prior to doravirine exposure and maintained or worsened but were not severe enough for a switch off doravirine.

Conclusion

- Doravirine was used in majority of reasons as a switch option. For those people who switched 99% remain undetectable.
- Although 52 (42%) people reported side effects, most of these resolved and there were low discontinuation rates (11%).
- 13 (6%) people had an asymptomatic ALT rise, similar frequency to the SPC and most resolved after a short time.
- The findings are limited by missing data and did not include affect of doravirine exposure on lipids.
- Doravirine has been shown to be a viable ART choice particularly as a switch option for those requiring a STR or rationalising off a PI due to metabolic complications. This is important for our aging population where polypharmacy is of increasing concern.