University Hospitals Birmingham
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Hope for the future? Long-acting injectable antiretroviral therapy in a viraemic individual with a complex adherence history

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Introduction

- Long-acting (LA) injectables, consisting of Cabotegravir 600mg IM and Rilpivirine 900mg IM given every 8 weeks have transformed the landscape of modern anti-retroviral therapy (ART) for people living with HIV (PLWH) [1]
- These treatments are licensed in virologically suppressed individuals ≥ 12 years and weighing ≥ 35kg
- There are limited data for the use of these in viraemic individuals however this is a clinically important and appealing choice to young individuals with adherence issues to oral ART.
- Initial findings from the IMPAACT 2017 (MOCHA, More Options for Children and Adolescents) study highlighted high rates of virological suppression, no virological failures and good tolerability and acceptability in young people with perinatally acquired HIV[2].
- Emerging data internationally about the use of LA-ART in viraemic young PLWH are equally promising thus offering an alternative choice for achieving viral suppression [3, 4]
- Real-life data in England about the use of LA-ART in viraemic young PLWH with complex adherence challenges remains minimal

Background – L's journey to injectables

Born in West Africa as the youngest of 3 children

→ No significant illnesses in childhood

→ 10 years old : Diagnosis
- Mother, diagnosed with miliary TB & advanced HIV, dies after declining care.
- L diagnosed with presumed isoniazid-resistant TB & HIV.
- Left to care of 20-year-old brother with social support

↓

10 – 11 years old. Completes TB treatment under DOT (Directly Observed Therapy). Adherence challenges with ARVs anticipated

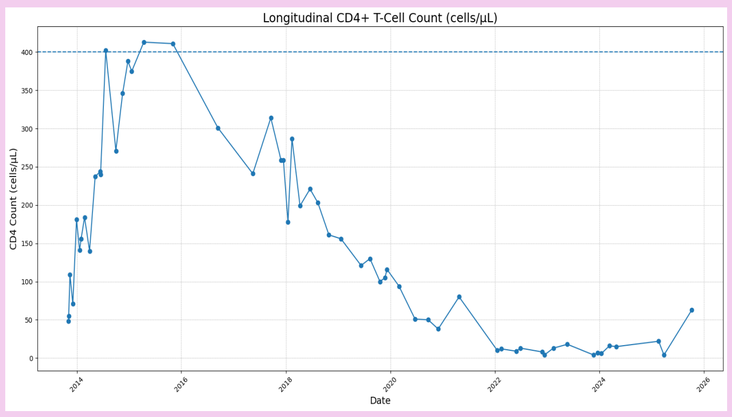
← 11 years old through teenage years & early adulthood : Adherence Challenges & Its Impact
- Unable to contemplate the sight of ARVs on occasion. Limited impact of psychological support
- Swallowing challenges. Not remediated by anti-emetics
- Decline in health with weight & hair loss, VZV (re) activation, HSV outbreaks
- Partners attending for PEPSE

← Early adulthood – Non-adherent to ARVs & at impending risk of clinical deterioration

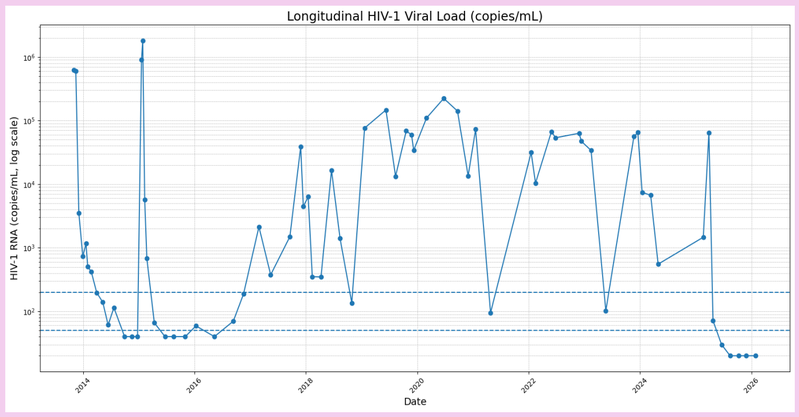
Antiretroviral Treatment History

In the quest for a palatable and tolerable regimen over the years, her ART regimen had undergone multiple changes **without evidence of viral drug resistance**.

Viral Load and CD4 counts since diagnosis



HIV Viral Loads



CD4 counts

Zenith VL- 1,809,162 copies/ml
Nadir VL - <20 copies/ml

ZenithCD4 – 413 cells/microlitre
Nadir CD4 – 4 cells/microlitre

Discussion

- Adherence and attendance challenges plagued *L*'s HIV growing up – anticipated at the end of DOT and driven by her psychosocial situation and swallowing difficulties
- In the quest for a palatable and tolerable regimen over the years, her ART regimen had undergone multiple changes without evidence of viral drug resistance
- *L* was significantly immunocompromised with a CD4 count < 20 cells/microlitre for 4 consecutive years prior to commencing LA-ART, with a concern for clinical deterioration and death
- LA-ART was considered the last practical option for *L* despite not meeting all the strict eligibility pre-requisites recommended by BHIVA (including 'having a detectable viral load and being at risk of pregnancy ')
- *L* started on LA-ART (without an oral lead-in) following approval in the MDT, local finance approval and support from the MDT and CHIVA support worker to attend clinic
- Within 3 months of LA-ART, *L* became virologically suppressed. She now has an improving CD4 count and BMI and has not missed any clinic visits for injectables

Conclusion

- This is a hugely successful case exhibiting the impact of LA-ART on those who need it most – patients who are immunocompromised due to the inability to take oral ART
- *L,* who is now 23, would likely have ended up very unwell with opportunistic infections if her treatment journey had not taken a path down LA-ART and this would have been a huge burden on her as well as the healthcare system
- She has always been very conscious about her appearance and regularly comes to clinic now, very proud of how she looks and the course that her condition has taken since switching her treatment
- More research is needed into the use of LA-ART in viraemic individuals and especially in those with perinatally acquired HIV

References

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