2493. Real-World Utilization of Ibalizumab (IBA) Without an Optimized Background Regimen (OBT)

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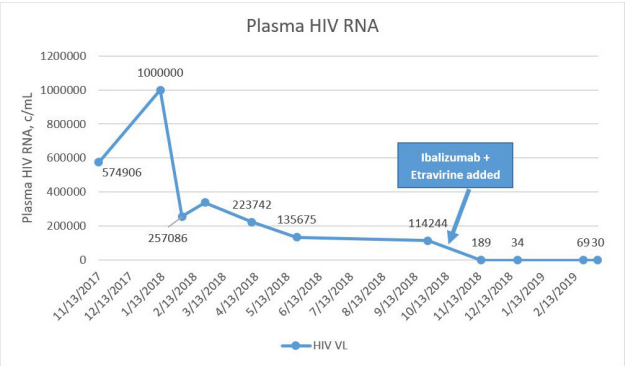
Background. It is difficult to treat multidrug-resistant (MDR) human immunodeficiency virus (HIV). Trogarzo® (ibalizumab) a novel monoclonal antibody was approved in 2018 for heavily treatment-experienced HIV patients. Data support IBA use with at least one fully active agent, an OBR. Real-world IBA data are lacking. We report a successful case of reaching and maintaining suppression with IBA in a patient without an OBR.

Methods. Mutations were reviewed for the patient, Table 1, and evaluated for treatment. The patient is a 52- year old male, diagnosed in 1994, with MDR HIV secondary to non-adherence. Upon re-presenting to care, the patient was non-compliant with ART. Genotypic interpretation via the Stanford/ANRS algorithm was performed and interpreted, resulting in the addition of IBA intravenous administration every other week. IBA was obtained through patient assistance and costs were covered by the institution for infusion.

Results. Evaluation of the resistance profile indicated varying resistance to all available ART. More specifically, high-level resistance to all FDA-approved INSTIs, PIs, and low to high-level resistance to all NNRTIs and NRTIs. Table 2 outlines the ART history and viral load (VL) trends. The patient was initiated on daruanvir/ritonavir twice daily, etravirine twice daily, emtricitabine/tenofovir alafenamide and did not reach suppression. IBA was added off-label to a failing regimen. The patient reached VS (VL < 200 copies/mL) at Week 4 and has had an undetectable VL for 8 weeks. Notably his CD4 count has risen to 46, first detectable number since re-presenting to care.

Conclusion. We describe a heavily treatment experienced patient with an MDR HIV virus who achieved an undetectable VL without an OBT and the addition of intravenous IBA. Fostemsavir, was utilized in IBA's phase III trial for similar patients, however, it is not currently FDA-approved nor available. Further data are needed to ensure continued susceptibility to IBA without an OBT. This patient required high-level coordination to reach each visit and receive this therapy alongside his oral agents. We conclude, IBA has allowed this patient to reach and maintain VS.

Drug Class	Mutations
Integrase Inhibitors	T97A, E138T, G140S, Q148H, G163T
NNRTIs/NRTIs	M41L, A98G, M184V, T215Y, K101E
Protease Inhibitors	L10F, K20T, V32I, L33F, M36I, M46I, I47V, I54L, Q58E, I84V, K20T



Disclosures. **All authors:** No reported disclosures.

2494. Real-World Use of Ibalizumab in Physician Office Infusion Centers (POICs)

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Background. Ibalizumab-uiyk (IBA) was recently approved for the treatment of multi-drug-resistant HIV-1 infection in patients (pts) failing other antiretroviral regimens. Clinical trial data demonstrated a decrease in HIV-1 viral load in 83% and 43% of patients (n = 40) receiving IBA for 2 and 25 weeks (weeks), respectively. Real-world post marketing data are needed. This pilot study reports the experience of IBA utilization in POICs.

Methods. Medical records of patients receiving intravenous IBA from approval through April 2019 were reviewed. Data collected include demographics, infection and treatment history, IBA regimen and adverse events. Plasma HIV-1 RNA viral load (log_{10} copies/mL) and CD4 count (cells/μL) were collected at baseline and as available during therapy. Based on available follow-up (FU) labs, response was assessed at 4–10 weeks (FU 1), 14–22 weeks (FU 2), and 24–37 weeks (FU 3).

Results. Nine patients (mean age: 48 ± 11 years, 67% male) from 7 POICs received IBA for a median duration of 33 weeks (range 4–43). Median length of HIV-1 diagnosis was 22 years (range 8–25). Resistance to ≥1 drug in at least 3 drug classes was reported in 56%. All patients received at least one concurrent anti-retroviral agent. IBA was initiated at 2000 mg followed by 800 mg every 2 weeks. All patients received infusions as scheduled (151 total infusions) except for one requiring a second loading dose. Baseline mean CD4 count and viral load were 49 cells/μL and 4.9 log_{10} copies/mL, respectively. Labs obtained at FU 1 indicated a decrease in viral load of at least 0.5 log_{10} copies/mL in 6/8 patients (75%); a mean reduction of 2.1 ± 1.8 log_{10} copies/mL (Table 1). Mean HIV-1 titers available for patients at FU 2 (n = 6) and FU 3 (n = 7) were 3.1 ± 2.0 and 3.2 ± 2.6 log_{10} copies/mL, respectively. Mean CD4 counts were 65 ± 57 cells/μL at FU 1, 96 ± 61 cells/μL at FU 2 and 88 ± 82 cells/μL at FU 3. Adverse events were reported in 8 patients (89%), most common itching/rash, diarrhea and abdominal pain. None resulted in discontinuation of IBA.

Conclusion. This study confirms the antiviral activity of IBA in patients with advanced HIV-1 infection in the real-world setting. We observed well-tolerated therapy with an early reduction in HIV-1 viral load of 75%, followed by a 43% reduction ≥24 weeks, consistent with the clinical trial.

Table 1. Time-dependent Effect of Ibalizumab on Viral Load and CD4 Count

Patient ID	Length on Ibalizumab (to-date)	Viral Load/ CD4 Count	Baseline	Follow-Up 1 (week 4 to 10)	Follow-Up 2 (week 14 to 22)	Follow-Up 3 (week 24 to 37)
#1	45 weeks	log_{10} copies/mL/ cells/μL	5.4 / 50	5.1 / 79	5.2 / 88	5.5 / 95
#2	42 weeks	log_{10} copies/mL/ cells/μL	3.1 / 205	1.9 / 169	1.9 / 165	not detected / 144
#3	41 weeks	log_{10} copies/mL/ cells/μL	4.6 / 15	4.6 / 24	4.5 / 11	4.5 / 10
#4	38 weeks	log_{10} copies/mL/ cells/μL	5.3 / 47	n/a / n/a	n/a / n/a	5.5 / 3
#5	33 weeks	log_{10} copies/mL/ cells/μL	4.9 / 54	1.5 / 98	not detected / 116	not detected / 115
#6	31 weeks	log_{10} copies/mL/ cells/μL	5.4 / 60	1.9 / 102	2.2 / 153	1.6 / 225
#7	26 weeks	log_{10} copies/mL/ cells/μL	5.0 / 4	2.4 / 11	4.9 / 41	5.3 / 25
#8	8 weeks	log_{10} copies/mL/ cells/μL	6.0 / 0	4.9 / 0	pending / pending	pending / pending
#9	4 weeks	log_{10} copies/mL/ cells/μL	4.9 / 2	not detected / 36	expired	

Abbreviations: n/a; labs not available.

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2495. Pharmacokinetics of Cabotegravir (CAB) and Rilpivirine (RPV) Long-Acting (LA) Injectables in HIV-infected Individuals through 48 Weeks in the FLAIR and ATLAS Phase 3 Studies

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Background. Monthly injectable CAB LA + RPV LA was noninferior to daily oral 3-drug antiretroviral therapy in HIV-1 virologically suppressed adults. CAB and RPV pharmacokinetics (PK) were assessed during the 48 Week maintenance period of the ATLAS and FLAIR Phase 3 studies.

Methods. Patients received oral CAB 30 mg + RPV 25 mg once daily for 4 weeks to assess individual tolerability prior to intramuscular (IM) injections of CAB LA 600 mg + RPV LA 900 mg followed by CAB LA 400 mg + RPV LA 600 mg every 4 weeks. Plasma CAB and RPV concentrations were measured pre-and post-dose at select visits using validated analytical methods.

Results. Baseline demographics for the pooled randomized ATLAS and FLAIR population (n = 591, LA arms) were: median age 38 years, 27% female, 18% African American, median BMI 25 kg/m^2 (range: 15 – 51). CAB and RPV plasma concentrations at select visits are summarized in the table. After initial IM doses, mean CAB and RPV troughs were well above their respective in vitro PA-IC90 values (CAB, 0.166 μg/mL; RPV 12 ng/mL). At Week 48, mean CAB troughs were 17x PA-IC90 and between oral CAB 10–30 mg exposures. Similarly, mean RPV troughs were 7x PA-IC90 and remained within the exposure range following oral RPV 25 mg once daily. 80% of RPV steady-state was achieved by Week 48 and 100% for CAB by Week 44. Initial CAB concentrations in females and those with BMI ≥30 kg/m^2 were lower due to slower absorption but this difference resolved by Week 48. For RPV, there was no absorption difference by gender or BMI.

Conclusion. CAB and RPV PK were consistent between studies achieving therapeutic concentrations within the first dosing interval that steadily increased over time through Week 48, for both males and females and irrespective of BMI. CAB LA + RPV LA provided compatible PK profiles following monthly IM dosing in a diverse patient population through 48 weeks.