Poster 2485

Real-World Experience With Dolutegravir Plus Rilpivirine Two-Drug Regimen

Cindy Garris
ViiV Healthcare
cindy.p.garris@viivhealthcare.com

Douglas Ward,[1] Steven Scheibel,[2]* Moti Ramgopal,[3] David J. Riedel,[4] Cindy Garris,[5] Shelly Dhir,[5] John Waller,[6] Jenna Roberts,[6] Katie Mycock,[6] Alan Oglesby,[5] Bonnie Collins,[5] Megan Dominguez,[5] James Pike,[6] Joseph Mrus[5]

[1]Dupont Circle Physicians Group, Washington, DC, USA; [2]Borrego Health Specialty Care Center, Desert Hot Springs, CA, USA; [3]Midway Immunology and Specialty Care Center, Fort Pierce, FL, USA; [4]Institute of Human Virology, University of Maryland School of Medicine, Baltimore, MD, USA; [5]ViiV Healthcare, Research Triangle Park, NC, USA; [6]Adelphi Real World, Macclesfield, Cheshire, UK

**We regret to announce that our friend and colleague Dr Steven Scheibel has recently passed away*

Introduction

- Three-drug regimens (3DRs) have long been the mainstay of antiretroviral treatment (ART) for HIV.[1–4] However, due to the lifelong nature of HIV treatment and the potential for drug toxicity, interest in two-drug regimens (2DRs) has grown.[5]
- Acceptance of 2DRs has been bolstered by recent studies, including SWORD-1 and -2 and GEMINI-1 and -2. These studies have provided evidence that dolutegravir (DTG)-based 2DRs (DTG 2DRs) can be effective alternatives to 3DRs for the treatment of HIV-1 infection.[6–8]
- As a result, treatment guidelines now recommend 2DRs as alternative therapeutic options in both ART-naïve patients and ART-experienced patients who are virologically suppressed.[1–2]
- In November 2017, the first 2DR single-tablet regimen, Juluca (DTG/rilpivirine [RPV]) was approved in the US for treatment of virologically suppressed patients.[9]
- To better understand healthcare provider perception of 2DRs prior to Juluca availability, this study evaluated DTG 2DR treatment patterns in clinical practice before July 31, 2017.

Methods

- This retrospective medical chart review was conducted across 10 US sites identified as using any DTG 2DRs. Eligible patients were adults initiated on DTG 2DR prior to July 31, 2017 (index date) with follow-up at least to January 30, 2018, ensuring 6 months of clinical data.
  - Patient inclusion criteria: ≥18 years of age, confirmed diagnosis of HIV-1, and must have initiated a 2DR prior to the index date. The 2DR was required to be comprised of DTG in combination with one additional ART (boosting with ritonavir or cobicistat was permitted).
  - Patient exclusion criteria: patients on ARTs without an approved HIV indication (e.g., for pre-exposure prophylaxis) and those involved in prior ViiV-sponsored clinical studies evaluating DTG 2DR were excluded.
  - Patient demographics, clinical characteristics, and treatment history were abstracted from medical charts and entered into standardized case report forms. All analyses were descriptive.
- Primary objective: to determine reason(s) for initiating DTG 2DR, and to describe the demographics and clinical characteristics of patients receiving this regimen in clinical practice.
  - This poster presents data from a post hoc analysis of the patient subgroup who received a DTG 2DR comprised of DTG+RPV. The overall study results have been previously presented.[10]

Results

Patients

- Data were abstracted for 278 patients, of whom 66 initiated DTG+RPV. Demographics and clinical characteristics for the total population and the DTG+RPV subgroup are shown in **Table 1**.
- In the DTG+RPV subgroup, most patients (94%) had previously been treated with ARTs prior to initiating DTG+RPV, with an average 15.5 years of prior ART (vs 13.5 years in the total population).

Table 1. Demographics and Clinical Characteristics of Patients in the Total Population and Those Receiving DTG+RPV

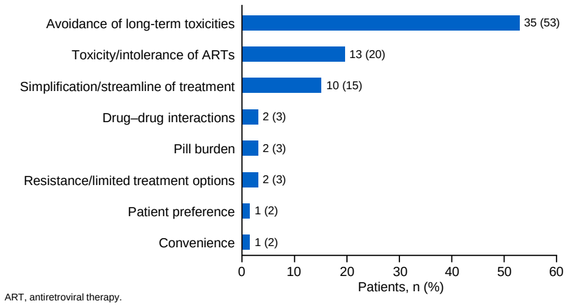
	All DTG 2DR patients N=278	DTG+RPV patients n=66
Age (years), mean (SD)	56 (12)	56 (11)
Male, n (%)	194 (70)	52 (79)
Race, n (%)		
White/Caucasian	132 (48)	45 (68)
Black	137 (49)	15 (23)
Other	7 (3)	6 (9)
Data not available	2 (<1)	0 (0)
Hispanic/Latino, n (%)	26 (9)	9 (14)
Additional clinical characteristics,[a] n (%)		
Comorbidities	138 (50)	26 (39)
Mental health issues	68 (25)	17 (26)
Polypharmacy	70 (25)	7 (11)
Health insurance issues	52 (19)	5 (8)
Low health literacy	49 (18)	3 (5)
Substance abuse	37 (13)	5 (8)
Difficult work/family schedule	23 (8)	0 (0)
Job instability	23 (8)	1 (2)
Limited access to healthcare	14 (5)	0 (0)
No additional clinical characteristics	62 (22)	31 (47)
Prior ART		
≥4 prior ART regimens, n (%)	139 (50)	32 (49)
Duration of prior ART (years), mean (SD)	13.5 (8.2)[b]	15.5 (8.4)
Most common ART regimens prior to DTG+RPV initiation,[a] n (%)		
TAF+FTC+RPV	–	7 (11)
ATV[c]+DTG	–	5 (8)
ABC+3TC+DTG	–	4 (6)
HIV-1 RNA viral load prior to DTG 2DR initiation, n (%)		
Suppressed (<50 copies/mL)	116 (42)	46 (70)
Detectable (≥50 copies/mL)	148 (53)	20 (30)
Mean (median)[d]	43,389 (966)	103,977 (1682)
CD4+ cell count prior to DTG 2DR initiation, cells/mm^3, mean (range)	525 (14, 1497)[e]	666 (56, 1497)[f]

[a]Data are listed for additional clinical characteristics or regimens reported in ≥5% of all patients; [b]Data were only available for 125 patients; [c]May be boosted with cobicistat or ritonavir; [d]Data included for patients with detectable viral load; [e]Data were only available for 268 patients; [f]Data were only available for 58 patients.
3TC, lamivudine; ABC, abacavir; ART, antiretroviral therapy; ATV, atazanavir; DTG, dolutegravir; FTC, emtricitabine; RPV, rilpivirine; SD, standard deviation; TAF, tenofovir alafenamide.

DTG+RPV initiation

- The reason(s) noted by physicians for initiating DTG+RPV are shown in **Figure 1**. The most common reasons were avoidance of long-term toxicities, toxicity/intolerance of ARTs, and the desire to simplify/streamline treatment.
- Mean (SD) time on DTG+RPV was 1.6 (0.6) years. All but one patient was taking DTG+RPV as a once-daily regimen.
- Before initiation of DTG+RPV, 70% of patients were suppressed (vs 42% in the total population); of these, 98% remained suppressed while on DTG+RPV. Of the 30% of patients who were detectable at DTG+RPV initiation, 60% became suppressed and remained suppressed (**Table 2**).
- Most patients (91%) achieved the desired outcome from DTG+RPV treatment according to physicians.

Figure 1. Primary Reason(s) for Initiating DTG+RPV



ART, antiretroviral therapy.

Table 2. Virologic Response Following DTG 2DR Initiation

	DTG 2DR N=287	DTG+RPV subgroup N=66
Suppressed (<50 copies/mL) prior to DTG 2DR, n (%)	**116 (42)**	**46 (70)**
Initially suppressed, remained suppressed	110 (95)	45 (98)
Initially suppressed, became detectable	6 (5)	1 (2)
Not suppressed (≥50 copies/mL) prior to DTG 2DR, n (%)	**140 (50)**	**20 (30)**
Initially detectable, became suppressed, remained suppressed	111 (79)	12 (60)
Initially detectable, remained detectable	22 (16)	4 (20)
Initially detectable, became suppressed, then rebounded	7 (5)	2 (10)
Data not available	–	2 (10)
Virologic data not available, n%	**22 (8)**	**0 (0)**

Discontinuation of DTG+RPV

- In the DTG+RPV subgroup, 5 (8%) patients discontinued DTG+RPV by data cut-off, and one additional patient was lost to follow-up.
- The reasons for discontinuation were virologic failure (n=2), treatment simplification/streamlining (n=2), and toxicity/intolerance to ARTs (n=1).
- Of the two patients who were discontinued for virologic failure, one was switched to a DTG+TAF+RPV+FTC regimen and the other to an unknown regimen.
- Of the two patients discontinued for treatment simplification/streamlining, one was switched to a TAF+RPV+FTC regimen, and the other to DTG+RPV (this may have been a switch to the single-tablet regimen). The patient discontinued for toxicity/intolerance was switched to a raltegravir+darunavir regimen.

Conclusions

- Before the DTG/RPV single-tablet regimen became commercially available in the US, the 2DR DTG+RPV was used mainly in treatment-experienced patients, most commonly to avoid potential long-term toxicities.
- A large proportion of patients who initiated a DTG+RPV or other DTG-based 2DR regimen achieved and maintained virologic suppression and discontinuation rates were low.
- Physicians reported that DTG+RPV achieved the desired outcome in most patients (91%), suggesting that DTG+RPV is an effective approach for the maintenance and achievement of viral suppression in this cohort of patients in the US.
- Despite being used in a much more experienced population, real-world experience with DTG+RPV appears to be consistent with outcomes in Phase 3 clinical trials.

Disclosures

Juluca is a trademark owned by or licensed to the ViiV Healthcare group of companies.

CG, SD, AO, BC, MD, and JM are employees of ViiV Healthcare; JW, JR, KM, and JP are employees of Adelphi Real World, which was contracted by ViiV Healthcare to perform the study. DW is on the Speakers' Bureau for ViiV Healthcare. MR has been a speaker for Gilead, Janssen, and ViiV Healthcare; and has served as a consultant for Gilead, Janssen, Merck, and ViiV Healthcare. DJR has served as a consultant for a ViiV Healthcare advisory board.

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References

1. DHHS. Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents Living with HIV, October 2018: https://aidsinfo.nih.gov/contentfiles/lyguidelines/adultandadolescentgl.pdf.
2. EACS Guidelines, Version 9.1, October 2018: http://www.eacsociety.org/files/2018_guidelines-9.1-english.pdf.
3. WHO. The use of antiretroviral drugs for treating and preventing HIV infection, June 2016: https://www.who.int/hiv/pub/arv/arv-2016/en/.
4. WHO. Updated recommendations on first-line and second-line Antiretroviral regimens and post-exposure prophylaxis and recommendations on early Infant diagnosis of HIV, December 2018: https://www.who.int/hiv/pub/guidelines/ARV2018update/en/.
5. Moreno S, et al. *HIV Med* 2019;20 [Suppl. 4]:2–12.
6. Llibre JM, et al. *Lancet* 2018;391:839–49.
7. Van Wyk J, et al. 25th Annual Conference of the British HIV Association, Bournemouth, UK, April 2–5, 2019; Poster P008.
8. Cahn P, et al. *Lancet* 2018;393:143–55.
9. ViiV Healthcare. Juluca Prescribing Information, September 2018: https://www.gsksource.com/pharma/content/dam/GlaxoSmithKline/US/en/Prescribing_Information/Juluca/pdf/JULUCA-PI-PIL.PDF
10. Garris C et al. *Value in Health* 2019;22 [Suppl. 2]:S195.