Demographic and Clinical Characteristics of Patients Living With HIV Treated With Darunavir- and Atazanavir-based Regimens in the Real-world Setting

Introduction

Aim: To describe demographic and clinical characteristics of HIV-1–infected patients treated with darunavir (DRV) or atazanavir (ATV)-based regimens (DRV/r or ATV/r) in a real-world setting using administrative claims data from a US commercially insured and Medicare Advantage–insured population.

Objective

• To describe demographic and clinical characteristics of HIV-1–infected patients treated with DRV- or ATV-based regimens.

Methods

Study Design

• Retrospective cohort study using administrative claims data from the Optum Research Database (ORD) and the Impact National Benchmark Database (IMPACT). Patients were identified using data from January 1, 2012 to March 31, 2015.

• Inclusion criteria:
  - Continuous enrollment with medical and pharmacy benefit coverage for 24 weeks prior to the index date (pre-index period) and ≥24 weeks beginning on the index date (follow-up period)
  - Among patients with available HIV RNA viral load or CD4+ count results, a viral load >1,000 copies/mL and/or a CD4+ count <200 cells/µL
  - Presence of potential opportunistic infections (based on medication claims; see Table 1).

• Exclusion criteria:
  - Patients under 18 years of age as of the index year
  - Patients with missing age, gender, and geographic region

• Data Sources

  - DRV/r: 67,172 enrollees with medical and pharmacy benefits and ≥1 pharmacy claim for any ARV agent during the study period
  - ATV/r: 12,841 enrollees with medical and pharmacy benefits and ≥1 pharmacy claim for any ARV agent during the study period

• DRV/r cohort: 1,038 patients

• ATV/r cohort: 1,004 patients

• DRV/r patients:
  - Male: 84% (n = 867)
  - White: 59% (n = 611)
  - Mean age: 45.2 years (SD 11.3 years)

• ATV/r patients:
  - Male: 78% (n = 780)
  - White: 69% (n = 693)
  - Mean age: 47.7 years (SD 13.4 years)

• Table 1: Baseline Demographic Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>DRV/r (n = 1,038)</th>
<th>ATV/r (n = 1,004)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>45.2 ± 11.3</td>
<td>47.7 ± 13.4</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Sex (male)</td>
<td>84% (867)</td>
<td>78% (780)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>59% (611)</td>
<td>69% (693)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>African American/black</td>
<td>20% (207)</td>
<td>19% (196)</td>
<td>NS</td>
</tr>
<tr>
<td>Asian</td>
<td>11% (115)</td>
<td>15% (151)</td>
<td>NS</td>
</tr>
<tr>
<td>Other</td>
<td>8% (86)</td>
<td>7% (72)</td>
<td>NS</td>
</tr>
</tbody>
</table>

• Pre-index period clinical characteristics

  - A higher percentage of patients in the DRV versus ATV group had an AIDS-defining condition and/or opportunistic infection (67% vs 60%; P = 0.014). Figure 3A

  - A higher percentage of patients in the DRV versus ATV group were white (59% vs 69%; P = 0.014). Table 1

• Measures

  - Mortality and hospitalization rates were measured and not captured.
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• Outcomes

  - Time to first treatment change

• Study population identification

  - Newly HIV-1 infected patients with medical and pharmacy benefit claims for any ARV agent during the study period

• Study population description

  - Newly HIV-1 infected patients with medical and pharmacy benefit claims for any ARV agent during the study period

• Results

  - Baseline demographic characteristics

  - Table 1: Baseline Demographic Characteristics

  - Pre-index period clinical characteristics

  - Figure 3A: Pre-index period comorbidities and clinical characteristics

• Discussion

  - In the real-world setting, patients treated with DRV-based regimens were younger, had more prior treatment with ARV agents, and had more patients with AIDS-defining conditions compared to ATV-based regimens. These differences should be considered when comparing outcomes between DRV and ATV treatment regimens.

• Conclusion

  - The study population was generally representative of real-world settings in the US. However, the study had several limitations.

• Acknowledgments

  - The authors would like to acknowledge the contributions of...