BACKGROUND: Numerous analyses have suggested that patients initiating antiretroviral therapy (ART) on a single-tablet regimen (STR) are more likely to remain on treatment longer and less likely to be hospitalized. The number of STRs available has increased notably since 2011. A recent study found that three-quarters of all treatment-naïve patients are now initiating an STR but few studies have assessed the characteristics of patients initiating STRs by formulation.

OBJECTIVE: To evaluate the demographic and clinical characteristics of patients initiating four weekly and STRs: EVG/c/FTC/TDF, RPV/FTC/TDF, EFV/FTC/TDF, and DTG/ABC/3TC, and understand if differences in adherence are associated with the different formulations.

METHODS: The observational HIV Epidemiology & Research Analysis (OHERA) database contains electronic health records from 70,000 community-based outpatient HIV or multispecialty clinics in 15 states. The data represent 850,000 HIV-infected patients and 1% of all patients who initiated ART in the US. OHERA is the largest US HIV database with data refreshed daily. Data from 1/1/05-12/31/15 were extracted and analyzed. It had baseline labs and HIV viral loads (VLs) 03 days prior to enrolling in STR (defined as the date of the last observation carried forward (LOCF)). LOCF was used for follow-up time. Patients with missing ART agents or, if still significant, suggested a different finding (data not shown).

RESULTS: A total of 1,139 patients were not study eligible: 2,432 patients (17%) who initiated ART with DTG/ABC/3TC, 2,371 patients (16%) with EVG/c/FTC/TDF, 1,139 patients (16%) with EFV/FTC/TDF, and 638 patients (56%) with RPV/FTC/TDF. Patients initiating STR were more likely to be female and African American. They were also more likely to be female and African American. Patients receiving RPV/FTC/TDF were more likely to present early and least likely to initiate ART with VL≥100,000 copies/mL. They were also more likely to be female and African American.

DISCUSSION: These therapy-specific characteristics were observed to change when the population was stratified by patients initiating ART for at least 3 years as a result of changing treatment guidelines and evaluation of the epidemic.

KEY FINDINGS:

- Patients receiving RPV/FTC/TDF were more likely to be aged 50 or older, to have CD4+ cell counts <500, and more likely to have documented HIV/HCV co-infection. They were significantly less likely to be female or African American. They were also more likely to be female and African American.

- Patients initiating RPV/FTC/TDF were more likely to have 0-10,000 VL copies/mL, to have had an ADE prior to initiation and to be otherwise more comorbid, most notably to have a history of cancer, hyperlipidemia, liver disease and substance abuse prior to initiation.

- Patients initiating RPV/FTC/TDF were more likely to present early and least likely to initiate in CHC patients, while patients initiating RPV/FTC/TDF were more likely to be heroin and alcohol dependent.

- Patients initiating RPV/FTC/TDF were more likely to be black or African American.

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