Background

Dolutegravir (DTG) was approved for antiretroviral therapy mainly on data from triple association with two nucleosides, however very few physicians started to use it within different regimens, including two-drug regimens [1,2]. This analysis aims to investigate whether various DTG-based regimens have their own specificity and to describe them.

Methods

the DOLUTILITY Study is a single-center part of the ODODACRE Cohort. For all the patients who started DTG in any combination from November 10, 2014, to April 30, 2017, we collected baseline demographic, pharmacologic, viologic, immunologic and metabolic data, routine clinical data and blood work and outcomes. Only those subjects who had started DTG within 12 weeks before the analysis (April 30, 2016) were included. The statistical analysis is based on the Mann-Whitney test and the Wilcoxon test for continuous variables and on the Fisher exact test for contingency.

Results

1039 patients were included. The six regimens that were studied are: abc/3tc/drt [1,2] (abc/3tc/drt), abc/3tc/rtv (abc/3tc/rtv), abc/3tc/abq (abc/3tc/abq), abc/3tc/abq/rtv (abc/3tc/abq/rtv), abc/3tc/abq/rtv (abc/3tc/abq/rtv), abc/3tc/abq/rtv (abc/3tc/abq/rtv). Table 1 summarizes the baseline demographic and epidemiologic characteristics. Overall, abc/3tc/drt and abc/3tc/rtv had longer-time from HIV diagnosis and longer time on therapy (P<0.0001 for both), while abc/3tc/abq and abc/3tc/abq/rtv had more OAC stage 4, and diagnosis and history of treatment failure (P<0.0001 for both), abc/3tc/abq/rtv had often been diagnosed in the context of an episode of MC and HIV infection was present only in the abc/3tc/abq/rtv group. The analysis of past exposure to antiretrovirals and baseline and historical resistance-associated mutations (RAMs) revealed that, abc/3tc/drt and abc/3tc/abq had the heaviest burden, while abc/3tc/rtv was only slightly affected. Table 1 describes the main reasons for the switch and their statistical relevance, compared to the choice for abc/3tc/drt. All the regimens showed ≥5% efficacy and the two viral failures (12 overall) were not accompanied by the selection of new mutations.

Conclusions

abc/3tc/abq being the main choice, abc/3tc/rtv is the choice for subjects with cardiovascular risk, short drug experience and few or no mutations, abc/3tc/abq/rtv for drug-experience subjects who retain sensitivity to both drug and need such regimen to avoid or correct metabolic toxicity. The analysis of past exposure to antiretrovirals and baseline and historical resistance-associated mutations (RAMs) revealed that, abc/3tc/drt and abc/3tc/abq had the heaviest burden, while abc/3tc/rtv was only slightly affected. Table 1 describes the main reasons for the switch and their statistical relevance, compared to the choice for abc/3tc/drt. All the regimens showed ≥5% efficacy and the two viral failures (12 overall) were not accompanied by the selection of new mutations.

Introduction

Since the commercial availability of dolutegravir (DTG), perceiving its antiretroviral potency, high barrier to resistance and low metabolic impact, several physicians started to use it within and outside the clinical trials’ schemes, generating a variety of antiretroviral regimens, fit for the variety of clinical situations and treatment history which characterize the HIV outpatients’ population.

Cameila Guccio was the first author to describe such heterogeneity in and we followed with more structured multicentre observational studies, particularly focused on the associations of dolutegravir plus rilpivirine and of dolutegravir plus boosted darunavir as dual regimens in different settings.

With this analysis we mean to investigate how has dolutegravir been used in our center, if indeed different regimens are proposed to different types of subjects, how they are being treated and what is the level of efficacy.

Methods

All HIV-1 infected naive subjects who had taken at least once from Luigi Sacco Hospital Pharmacy dolutegravir either as Tivicay™ or as Truvada™ between November 10, 2014 and April 30, 2017 were retrospectively included in an observational cohort. The list of the subjects was obtained by the Pharmacy Unit and the relative case record forms were investigated gathering demographic, epidemiologic, clinical, pharmacologic, immunovirological and metabolic data. For drug resistance, historical data have been gather to form an ‘ever observed’ mutation set.

Data have been analysed by treatment cohorts (regimens) at 96 weeks of follow-up, with analysis is based on the Mann-Whitney test and the Wilcoxon test for continuous variables and on the Fisher exact test for contingency.

References