clinical cases DDIs

Date of report 14 May 2024

Reported case interaction between **Bictegravir** and **Brivaracetam**

Drugs suspected to be involved in the DDI

Victim
Bictegravir

Daily Dose
50 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Nov. 1, 2021

End date
Ongoing

Perpetrator
Brivaracetam

Daily Dose
100 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Feb. 1, 2022

End date
Ongoing

Complete list of drugs taken by the patient

Antiretroviral treatment

Bictegravir/Emtricitabine/Tenofovir-AF

Complete list of all comedications taken by the patient, included that involved in the DDI

Brivaracetam 50mg/12 h

Clinical case description

Gender

Male

Age

58

eGFR (mL/min)

>60

Liver function impairment

No

Description

HIV infection diagnosed in 2000 with good clinical control on ART (several regimens), no virological failures, all ART changes performed for simplification. BIC/FTC/TAF started in November 2021. Epilepsy diagnosed in 2019 and treated with several anti-epileptic regimens. In February 2022, his neurologist modified the current regimen (levetiracetam) to brivaracetam 50mg /12 hs. Brivaracetam is a moderate CYP3A4 inducer in vitro (although not confirmed in vivo) what could eventually lead to reduced bictegravir exposure. Although a significant drug-drug interaction was not expected, data on co-administration of these two medications are scarce. Thus, it is of interest to report real-world cases with this anti-epileptic and ART combination.

Clinical Outcome

No unwanted outcome

Editorial Comment

Clinical studies have shown the absence of an inducing or inhibitory effect of brivaracetam on CYP3A4 or on drug transporters (Pgp, OATP, BCRP). It is not expected to observe relevant changes in the concentration of antiretrovirals when administered together with brivaracetam.

University of Liverpool Recommendation

N/A