clinical cases DDIs

Date of report 31 Oct 2023

Reported case interaction between **Bictegravir** and **Oxcarbazepine**

Drugs suspected to be involved in the DDI

Victim
Bictegravir

Daily Dose
50 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Sept. 24, 2023

End date
Ongoing

Perpetrator
Oxcarbazepine

Daily Dose
600 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Sept. 5, 2017

End date
Sept. 27, 2023

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

Oxcarbazepine 300 mg/12h, Olanzapine 20mg/24h, Haloperidol, Biperiden 2mg/24h, Amisulpride 400mg/8h, Lorazepam 1mg/12h, Topiramate 50mg/12h.

Clinical case description

Gender

Female

Age

45

eGFR (mL/min)

>60

Liver function impairment

No

Description

This woman went to the emergency room because she suffered a sexual aggression and started BIC/FTC/TAF as post-exposure prophylaxis. She was taking oxcarbazepine as concomitant medication due to epilepsy, which could decrease bictegravir and tenofovir alafenamide plasma concentrations due to induction of CYP3A, UGT1A1, and P-gp. For this reason, we recommended her switching oxcarbazepine 300mg/12h to levetiracetam 500mg/12h while taking BIC/FTC/TAF.

Clinical Outcome

No unwanted outcome

Editorial Comment

The case describes the potential interaction between BIC/FTC/TAF and oxcarbazepine, an enzyme inducer that could reduce TAF and BIC levels, with the consequent risk of virologic failure and development of resistance mutations. The use of oxcarbazepine in HIV patients complicates ART selection, as its inducing effect may affect PI, INSTI, NNRTI and TAF. Alternatives may include darunavir boosted with ritonavir or other antiepileptic drugs.
This case is useful to highlight that the risk of drug-drug interactions should always be assessed when starting a new medication. Also that we should raise awareness among emergency and primary care physicians to use tools (e.g. Liverpool website) to rule out possible interactions.
Another aspect to keep in mind is to change antiepileptic treatment in a stable patient to avoid interactions with ART, especially in post-exposure prophylaxis. In some patients, finding the right drug and dose of antiepileptic drugs can be complex and the consequences of having a seizure after switching medication is potentially dangerous. In this case, oxcarbazepine was switched to levetiracetam, without subsequent seizures being reported.

University of Liverpool Recommendation

- These drugs should not be coadministered

For more information click here

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