clinical cases DDIs

Date of report 05 May 2025

Reported case interaction between **Dolutegravir** and **Oxcarbazepine**

Drugs suspected to be involved in the DDI

Victim
Dolutegravir

Daily Dose
100 (mg)

Dose adjustment performed
Yes

Administration Route
Oral

Start date
Feb. 1, 2022

End date
Ongoing

Perpetrator
Oxcarbazepine

Daily Dose
600 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Jan. 1, 2014

End date
Ongoing

Complete list of drugs taken by the patient

Antiretroviral treatment

Darunavir/Cobicistat
Dolutegravir

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

Oxcarbazepine, Fluoxetine, Diazepam

Clinical case description

Gender

Female

Age

53

eGFR (mL/min)

>60

Liver function impairment

No

Description

A 53-year-old woman with HIV infection and an eating disorder characterized by high impulsivity and obesity (BMI 44 kg/m²) has been receiving treatment with oxcarbazepine (300 mg BID) since 2014. In February 2022 (viral load <50 copies/mL), antiretroviral therapy was prescribed with darunavir/cobicistat (800/150 mg QD) plus dolutegravir (50 mg BID) as a therapeutic simplification. After two years of follow-up (December 2024), the viral load remains <50 copies/mL. Oxcarbazepine is an inducer of CYP3A4 and UGT1A1, which may lead to a reduction in exposure to darunavir/cobicistat and dolutegravir. According to the prescribing information for dolutegravir and darunavir/cobicistat, a dose of 50 mg BID is recommended for dolutegravir, while for DRV/cobi alternative therapeutic options should be considered. In this clinical case, despite the potential interactions between oxcarbazepine and

antiretrovirals and the patient's high BMI, the viral load remained undetectable after more than two years of follow-up.

Clinical Outcome

No unwanted outcome

Editorial Comment

In this case, oxcarbazepine (300 mg BID) was co-administered with darunavir/cobicistat (800/150 mg QD) and dolutegravir (50 mg BID) in an extremely obese female patient (BMI 44 kg/m^2). In this case, there is also no evidence of resistance or treatment failure. Despite the patient's BMI and the fact that oxcarbazepine is an inducer of CYP3A4 and UGT1A1, which may lead to a reduction in exposure to darunavir/cobicistat and dolutegravir, the HIVRNA plasma viral load remained undetectable after more than two years of follow-up. A potential explanation is that oxcarbazepine's inducing capacity is lower than the inhibiting effect of cobicistat, which boosts darunavir levels and may mitigate induction effects. Dolutegravir is generally robust, though BID dosing is more than standard, possibly done here to counteract interactions with oxcarbazepine.

University of Liverpool Recommendation

■ Potential interaction - may require close monitoring, alteration of drug dosage or timing of administration

For more information click here

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