Date of report 15 May 2025

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
Unknown

End date
Unknown

Perpetrator
Oxcarbazepine

Daily Dose
300 twice daily (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Unknown

End date
Unknown

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

Clinical case description

Gender

Male

Age

54

eGFR (mL/min)

>60

Liver function impairment

No

Description

A 54-year-old person with HIV (PWH), virologically suppressed on bictegravir/emtricitabine/tenofovir alafenamide (B/F/TAF), had a medical history of neuropathy. Previous treatments—including amitriptyline, gabapentin, and pregabalin—were unsuccessful, leading to the prescription of oxcarbazepine (initially 300 mg twice daily). However, due to somnolence, the patient self-adjusted the dose to 150 mg twice or three times daily (total daily dose: 300–450 mg).

Despite the coadministration of B/F/TAF with oxcarbazepine, the patient remained virologically suppressed over a 12-month follow-up period, and bictegravir plasma concentrations remained within the therapeutic range (measured trough concentrations: 2,650 ng/mL and 3,900 ng/mL; reference range: 757–6,499 ng/mL). This was notable given that oxcarbazepine is a known inducer of CYP3A4 and UGT1A1, the enzymes involved in bictegravir metabolism.

This observation is likely explained by the dose-dependent inducing effect of oxcarbazepine. While alternatives to oxcarbazepine are generally recommended due to the potential risk of antiretroviral treatment failure, it may be feasible to coadminister bictegravir or dolutegravir with low daily doses of oxcarbazepine (<600 mg) in cases of refractory neuropathy—provided that therapeutic drug monitoring (TDM) is available to ensure adequate antiretroviral exposure.
This case was published by Pecora Fulco P et al. in the International Journal of STD & AIDS, 2025.

Clinical Outcome

No unwanted outcome

Editorial Comment

Coadministration of B/F/TAF and oxcarbazepine is not recommended. Oxcarbazepine induces CYP3A4 and UGT enzymes and is expected to decrease exposures to both tenofovir and bictegravir, which may lead to loss of therapeutic efficacy and the development of resistance. Although alternative anticonvulsants should be considered, this clinical case suggests that coadministration of low doses of oxcarbazepine with B/F/TAF may be feasible in people with suboptimal response to other anticonvulsants.
Despite the coadministration of B/F/TAF with oxcarbazepine, bictegravir plasma concentrations remained within the therapeutic range, and the patient maintained virologic suppression. This is likely explained by the low daily dose of

oxcarbazepine (450 mg) and its dose- and concentration-dependent inducing effect.

University of Liverpool Recommendation

- These drugs should not be coadministered

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