

Date of report 15 May 2025

Reported case interaction between Bictegravir and Oxcarbazepine

Drugs suspected to be involved in the DDI

Victim	Daily Dose
Bictegravir	50 (mg)
Dose adjustment performed	Administration Route
No	Oral
Start date	End date
Unknown	Unknown
Perpetrator	Daily Dose
Oxcarbazepine	300 twice daily (mg)
Dose adjustment performed No	Administration Route Oral
Start date	End date
Unknown	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 12month 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 concentrationdependent inducing effect.

University of Liverpool Recommendation

• These drugs should not be coadministered

For more information <u>click here</u>