clinical cases DDIs

Date of report 17 Mar 2026

Reported case interaction between **Dolutegravir** and **Rifampin**

Drugs suspected to be involved in the DDI

Victim
Dolutegravir

Daily Dose
100 (mg)

Dose adjustment performed
Yes

Administration Route
Oral

Start date
April 1, 2024

End date
Jan. 1, 2025

Perpetrator
Rifampin

Daily Dose
600 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
April 1, 2024

End date
Jan. 1, 2025

Complete list of drugs taken by the patient

Antiretroviral treatment

Dolutegravir/Abacavir/Lamivudine

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

Rifampin (600 mg once daily), isoniazid, pyrazinamide, and ethambutol for two months, followed by rifampin (600 mg once daily) and isoniazid for an additional seven months.

Clinical case description

Gender

Female

Age

50

eGFR (mL/min)

Hemodialysis

Liver function impairment

No

Description

A 50-year-old woman with HIV infection diagnosed in 2005 and chronic kidney disease on hemodialysis three times per week was diagnosed with tuberculosis (TB) in April 2024. At that time, she was receiving antiretroviral therapy (ART) consisting of darunavir/ritonavir (600/100 mg twice daily), etravirine (200 mg twice daily), and dolutegravir (50 mg once daily).

Anti-TB treatment was initiated with rifampin (600 mg once daily), isoniazid, pyrazinamide, and ethambutol for two months, followed by rifampin (600 mg once daily) and isoniazid for an additional seven months. Due to significant drug–drug interactions, ART was switched to dolutegravir/abacavir/lamivudine (50/600/300 mg) once daily in the morning, with an additional 50 mg dose of dolutegravir

administered in the evening (i.e., dolutegravir 50 mg twice daily). Plasma HIV RNA remained suppressed (<50 copies/mL) throughout TB treatment.
Rifampin is a potent inducer of CYP3A4 and UGT1A1 enzymes and can significantly reduce dolutegravir exposure. Although a phase 2b, non-comparative, placebo-controlled trial suggested that dolutegravir 50 mg once daily may be sufficient to maintain virological suppression in people with HIV/TB receiving rifampin-based therapy, we elected to follow the dolutegravir prescribing information and administer 50 mg twice daily during concomitant TB treatment. This decision was made pending further data and clinical experience regarding the adequacy of once-daily dosing in this setting.

Clinical Outcome

No unwanted outcome

Editorial Comment

This case highlights the clinically relevant interaction between rifampin and dolutegravir. Rifampin is a potent inducer of CYP3A4 and UGT1A1 enzymes and can significantly reduce dolutegravir exposure, potentially compromising virological efficacy.
Although a phase 2b, non-comparative, placebo-controlled trial suggested that dolutegravir 50 mg once daily may be sufficient to maintain virological suppression in people with HIV/TB receiving rifampin-based therapy, current prescribing information recommends increasing dolutegravir to 50 mg

twice daily during coadministration with rifampin. In this case, this strategy was followed, and virological suppression was maintained throughout tuberculosis treatment.
In the absence of robust comparative data and real-world experience supporting once-daily dosing in this context, a twice-daily dolutegravir regimen remains the preferred approach when coadministered with rifampin. This dose adjustment should be maintained for approximately 2 weeks after stopping rifampicin as the inducing effect may persist after discontinuation of a strong inducer.

University of Liverpool Recommendation

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

For more information click here

Personal information from the specialist

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