clinical cases DDIs

Date of report 19 Oct 2026

Reported case interaction between **Dolutegravir** and **Magnesium supplements**

Drugs suspected to be involved in the DDI

Victim
Dolutegravir

Daily Dose
50 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Aug. 1, 2021

End date
Ongoing

Perpetrator
Magnesium supplements

Daily Dose
Unknown

Dose adjustment performed
No

Administration Route
Oral

Start date

End date

Feb. 1, 2026 May 20, 2026

Complete list of drugs taken by the patient

Antiretroviral treatment

Dolutegravir
Lamivudine
Tenofovir-DF

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

Magnessium supplements, valproic acid

Clinical case description

Gender

Male

Age

60

eGFR (mL/min)

>60

Liver function impairment

No

Description

A 60-year-old man was diagnosed with HIV in 2009 following an episode of cerebral toxoplasmosis. Antiretroviral therapy (ART) with emtricitabine/tenofovir disoproxil fumarate/ efavirenz was initiated, together with valproic acid 500 mg orally once daily for seizure prevention.
Following virological failure, ART was switched in 2019 to emtricitabine/tenofovir disoproxil fumarate plus ritonavir-boosted darunavir. In 2021, the regimen was simplified to lamivudine 300 mg, tenofovir disoproxil fumarate 300 mg and dolutegravir 50 mg once daily. The patient consistently reported good adherence and tolerability, and maintained virological suppression apart from the previously documented episode of virological failure.

At a follow-up visit in April 2026, he reported continued adherence and no clinical complications. Laboratory testing on 5 May 2026 showed a CD4+ T-cell count of 216 cells/µL (11%) and an HIV-1 RNA level of 1,110 copies/mL. Renal and hepatic function were preserved.

Further questioning revealed that he had been taking a multivitamin supplement containing minerals, including magnesium, every morning for approximately 2–3 months. He took ART at night and continued taking valproic acid once daily.

A possible interaction between the magnesium-containing supplement and dolutegravir was considered, although the patient reported separating their administration by several hours. The supplement was discontinued, while ART and valproic acid were continued unchanged.

Repeat testing on 15 July 2026 showed an HIV-1 RNA level <20 copies/mL, documenting virological resuppression following discontinuation of the supplement.

Clinical Outcome

Loss of efficacy

Drug Interaction Probability Scale (DIPS)

Score

6 - Probable

Editorial Comment

This is an interesting case showing a number of important lessons. First, patients with HIV should be counseled that multivitamins may contain minerals, which can interact with InSTIs. Second, although the patient reported separate intake, there is always a risk that time of intake may vary, and actually may come too close to each other. Third, this interaction can indeed be clinically relevant, indicated by the increase in viral load. Fourth, luckily, no resistance appears to be developed, and the viral load was resuppressed using the same ART regimen. TDM data are not available, but could have supported the mechanism of this interaction.

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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