clinical cases DDIs

Date of report 21 Nov 2025

Reported case interaction between **Doravirine** and **Ursodeoxycholic acid**

Drugs suspected to be involved in the DDI

Victim
Doravirine

Daily Dose
100 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
May 1, 2022

End date
Ongoing

Perpetrator
Ursodeoxycholic acid

Daily Dose
600 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
March 1, 2019

End date
Ongoing

Complete list of drugs taken by the patient

Antiretroviral treatment

Emtricitabine/Tenofovir-AF
Doravirine

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

Ursodeoxycholic acid,
Desvenlafaxine, Zolpidem, Diazepam, Gabapentin, Tapentadol, Lidocaine patches, Calcium carbonate / Cholecalciferol, Acenocoumarol

Clinical case description

Gender

Male

Age

57

eGFR (mL/min)

>60

Liver function impairment

No

Description

A 57-year-old man was diagnosed with HIV in 2005. His medical history includes depressive syndrome, postherpetic neuralgia, mitral valve insufficiency with chronic atrial fibrillation, and obesity (BMI 37). In March 2019, while receiving antiretroviral therapy (ART) with darunavir/cobicistat/emtricitabine/tenofovir alafenamide (DRV/c/F/TAF), he underwent gastric bypass surgery and was subsequently prescribed ursodeoxycholic acid 600 mg daily.
In 2022, ART was switched to doravirine plus emtricitabine/tenofovir alafenamide (DOR + F/TAF) to avoid pharmacological boosting. Despite the potential for reduced doravirine plasma concentrations due to a drug–drug interaction with ursodeoxycholic acid, the patient has

maintained virological suppression since diagnosis. His plasma HIV RNA has remained consistently below 20 copies/mL, including the most recent measurement on July 14, 2025. Most recent BMI 27.8 on february, 2025.

Clinical Outcome

No unwanted outcome

Editorial Comment

This case offers valuable real-world insight into the potential interaction between doravirine and ursodeoxycholic acid (UDCA). Doravirine is primarily metabolized by CYP3A4, and in vitro data suggest that UDCA may induce CYP3A activity. Although the clinical relevance of this induction remains uncertain, such an interaction could theoretically reduce doravirine plasma concentrations and compromise virological efficacy.

The reassuring outcome observed in this patient—who maintained long-term virological suppression despite chronic UDCA use—suggests that the magnitude of CYP3A4 induction by UDCA may be limited. This is consistent with the findings of Dilger et al. (Hepatology 2005), who reported no significant CYP3A induction in patients treated with UDCA while receiving budesonide.

However, caution remains warranted. A published case report described a patient on rilpivirine/emtricitabine/tenofovir alafenamide who initiated UDCA 300 mg twice daily and subsequently developed undetectable rilpivirine trough concentrations one month later. Rilpivirine had to be replaced

with darunavir/cobicistat, and therapeutic concentrations were restored—likely because cobicistat’s strong CYP3A4 inhibition counteracted UDCA’s inducing effect. This observation supports the concern that UDCA may reduce exposure to antiretrovirals metabolized by CYP3A4 that lack inhibitory properties, such as doravirine.
Altogether, this case contributes to the limited evidence base by showing that doravirine can remain effective in the presence of UDCA, at least in some individuals. Nevertheless, the available data—both mechanistic and clinical—remain insufficient to rule out clinically relevant interactions. Until more robust evidence becomes available, coadministration of UDCA with doravirine should be approached with caution, with close monitoring of viral load and consideration of alternative ARVs in patients at higher risk of treatment failure.

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

Name
sofia

Surname
sabato

Institution
fli

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ES