clinical cases DDIs

Date of report 22 Nov 2024

Reported case interaction between **Cobicistat** and **Solifenacin**

Drugs suspected to be involved in the DDI

Perpetrator
Cobicistat

Daily Dose
150 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Unknown

End date
Ongoing

Victim
Solifenacin

Daily Dose
6 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Feb. 11, 2022

End date
Ongoing

Complete list of drugs taken by the patient

Antiretroviral treatment

Darunavir/Cobicistat/Emtricitabine/Tenofovir-AF
Dolutegravir

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

Solifenacin 6 mg, tamsulosine 0.4 mg, valsartan; dapaglifocin; atorvastatin, acetylsalicylic acid, espironolactone; furosemide; bisoprolol; vortioxetin; citalopram.

Clinical case description

Gender

Male

Age

76

eGFR (mL/min)

60-30

Liver function impairment

No

Description

76 year-old man with HIV infection diagnosed in 1986 and history of multiple ART regimens because of virological failures and drug resistance selection. In 2007, he received salvage therapy with TDF/FTC+RAL+DRV/r, achieving virologic suppression. In 2017, his ART regimen was simplified to TAF/FTC/DRV/cobi plus DTG, with sustained viral load suppression. In October 2024 his CD4 count was 760/mm3 (27%) and his HIV-1 RNA remained undetectable.
In February 2022, a urologist prescribed co-formulated tamsulosin (0.4 mg) and solifenacin (6 mg) once daily for benign prostatic enlargement. Despite solifenacine and tamsulosine are metabolized by CYP3A4, and increased concentrations are expected when co-admistered with the CYP3A inhibitor cobicistat, no adverse effects were observed

after 32 months of concurrent treatment with TAF/FTC/DRV/cobi.

Clinical Outcome

No unwanted outcome

Editorial Comment

This is an interesting case of the coadministration of two drugs for prostatic hyperplasia (tamsulosin and solifenacin). Both are metabolized through CYP3A4 and their exposure can be increase by the concomitant administration of strong CYP3A4 inhibitors such as cobicistat. In this patient, no unwanted side effect was noted. However, concomitant use of solifenacin and cobicistat requires, in case of no possible alternatives, caution and side effects monitoring (e.g., drowsiness, dizziness, irregular heartbeat, blurry vision, difficulty urinating, dry mouth, headache, gastrointestinal upset, or constipation).

Solifenacin is metabolized by CYP3A4 and concentrations are likely to increase due to inhibition of CYP3A4. A 3-fold increase in solifenacin exposure was observed with ketoconazole (a strong inhibitor of CYP3A4). It is recommended that solifenacin dosage should be limited to 5 mg once daily if coadministered with a strong CYP3A4 inhibitor such as darunavir/cobicistat.

Tamsulosin is metabolised mainly by CYP3A4 and to a lesser extent by CYP2D6. Coadministration with darunavir/cobicistat may increase tamsulosin exposure. Consider starting

tamsulosin at 0.4 mg/day, if coadministered. Blood pressure monitoring is recommended, particularly in older individuals.

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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