clinical cases DDIs

Date of report 24 Mar 2022

Reported case interaction between **Cobicistat** and **Atorvastatin**

Drugs suspected to be involved in the DDI

Perpetrator
Cobicistat

Daily Dose
150 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Jan. 23, 2019

End date
June 18, 2021

Victim
Atorvastatin

Daily Dose
80 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Jan. 15, 2021

End date
Ongoing

Complete list of drugs taken by the patient

Antiretroviral treatment

Darunavir/Cobicistat/Emtricitabine/Tenofovir-AF

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

Atenolol 50 mg c/24h, Amlodipine 5 mg/24h, Atorvastatin 80 mg/24h, Ezetimibe 10 mg/24h, Aspirin 100 mg/24h, Omeprazol 20 mg/24h, Nitrogliceryn 5mg c/24h transdermic

Clinical case description

Gender

Female

Age

54

eGFR (mL/min)

>60

Liver function impairment

No

Description

Atorvastatin dose was increased on 15/01/2021 from 40 mg daily to 80 mg daily, while patient was on ART with DRV/c/TAF/FTC.
On 18/06/2021 ART was changed to BIC/TAF/FTC to avoid interactions with atorvastatin.
No adverse effects were noted. Transaminases and hepatic function were normal. We did not check creatin-kinase levels.

Clinical Outcome

No unwanted outcome

Editorial Comment

Coadministration of darunavir/cobicistat with atorvastatin increases atorvastatin levels (with a dose of 10 mg of atorvastatin AUC and Cmax increase by 290% and 319% due to inhibition of CYP3A4, OATP1B1, and BCRP induced by darunavir). When this coadministration cannot be avoided, especially among cardiovascular patients, dose should be titrated gradually according to clincal response where possible, and the lowest possible effective dose used to avoid potential side effects related to atorvastatin. Safety monitoring and routine monitoring for adverse effects of statin treatment is essential. A daily dose of atorvastatin 40 mg should not be exceeded.
In this case, concommitant ezetimibe wa also being taken. The use of ezetimibe is also associated with muscle related events, including rhabdomyolysis. The risk of these events may therefore be increased with concomitant use of ezetimibe and atorvastatin.

University of Liverpool Recommendation

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

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