clinical cases DDIs

Date of report 05 Jan 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
Aug. 4, 2015

End date
Dec. 29, 2021

Victim
Atorvastatin

Daily Dose
80 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Aug. 15, 2021

End date
Ongoing

Complete list of drugs taken by the patient

Antiretroviral treatment

Elvitegravir/Cobicistat/Emtricitabine/Tenofovir-AF

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

Atorvastatin 80mg/d; Aspirin 100mg/d; Prasugrel 10mg/d; Omeprazol 20mg/d; Eplerenone 25mg/d; Bisoprolol 2.5 mg/d

Clinical case description

Gender

Male

Age

48

eGFR (mL/min)

>60

Liver function impairment

No

Description

HIV infection diagnosed in 2007, receiving several ARV regimens thereafter. Good adherence and tolerance to his last ARV regimen (EVG/cobi/FTC/TAF). Following strong intake of cocaine, sildenafil, alcohol and other illicit substances, he was admitted to the emergency room and myocardial infarction was diagnosed (acute coronary syndrome with ST-segment elevation).
Cardiological medication was prescribed and some drugs were adapted to the ARV regimen (prasugrel instead of clopidogrel), but not all doses of other concomitant medications were properly adjusted (atorvastatin was prescribed at 80 mg per day while the highest recommended daily dose of atorvastatin with cobicistat co-administration is 40mg).

Although the patient did not experience any toxicity, the ARV regimen was changed to DTG-3TC and atorvastatin dose was maintained.

Clinical Outcome

No unwanted outcome

Editorial Comment

Coadministration of atorvastatin (10 mg single dose) and elvitegravir/cobicistat/emtricitabine/tenofovir alafenamide (150/150/200/10 mg once daily) increased atorvastatin AUC and Cmax by 160% and 132%. If the use of atorvastatin is considered necessary, start with the lowest dose of atorvastatin and titrate carefully while monitoring for safety. A daily dose of 40 mg atorvastatin should not be exceeded with careful safety monitoring. (Note, American treatment guidelines recommend a maximum daily dose of 20 mg for atorvastatin.)
In addition, cobicistat may have also been involved in the adverse event presented with the illicit drugs and the sildenafil taken, highlighting the relevance of avoiding enhanced-based (cobicistat or ritonavir) ARV regimens when it is possible.

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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