clinical cases DDIs

Date of report 19 May 2023

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
Oct. 29, 2015

End date
Ongoing

Victim
Atorvastatin

Daily Dose
10 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
June 16, 2020

End date
April 1, 2022

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

Atorvastatin 10mg OD; Amlodipin

Clinical case description

Gender

Female

Age

49

eGFR (mL/min)

>60

Liver function impairment

No

Description

49 years old woman diagnosed with HIV-2. ART was initiated with TDF+3TC+LPV/r achieving plasma HIV RNA suppression and immune restoration. After some simplification ART switches, she is on TAF/FTC/DRV/cobi since 2018.
She receives treatment with amlodipine because of hypertension and she is also overweight (BMI 29.5)
In 2017 she received atorvastatin for some months because of dyslipidemia but this treatment was stopped because of myalgia. In 2020, atorvastatin was reinitiated because of high cholesterol levels. In 2022 she referred myalgia predominantly in the legs, initiated after the reintroduction of atorvastatin. During 2020 and 2021, face-to-face visits were replaced by phone calls because of the COVID-19 pandemic. Although she did not refer to symptoms in these phone calls, in the first face-to-face in April 2022, she referred initially to mild but progressive myalgia since the re-initiation of

myalgia. AST was normal and CPK was not available. Atorvastatin was switched to ezetimibe. Myalgia was resolved and cholesterol levels remain within the normal range. Cobicistat is a strong inhibitor of CYP3A4 as well as an inhibitor of BCRP and OATP1B1. Therefore, darunavir/ cobicistat, might increase atorvastatin concentrations and favor the emergence of atorvastatin-related adverse effects. However, an intrinsic side effect of atorvastatin independently of the concomitant use of TAF/FTC/DRV/cobi cannot be ruled out.

Clinical Outcome

Toxicity

Drug Interaction Probability Scale (DIPS)

Score

7 - Probable

Editorial Comment

Statins are present in 20-30% of people with HIV, especially among those over 50 years, and these symptoms may often be infra-diagnosed.
As CPK levels were not available, muscular damage could not be confirmed in this case. However, the repeated association between atorvastatin use (even at a low dose of 10 md/daily) and myalgia, and the potentially increased levels due to the

drug-drug interaction with darunavir/cobicistat may support the causal relationship.

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
Arkaitz

Surname
Imaz

Institution
Bellvitge University Hospital

Country
ES