clinical cases DDIs

Date of report 23 Dec 2020

Reported case interaction between **Cobicistat** and **Rifabutin**

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
Unknown

Victim
Rifabutin

Daily Dose
300 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Unknown

End date
Unknown

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

rifabutin

Clinical case description

Gender

Female

Age

63

eGFR (mL/min)

>60

Liver function impairment

Yes

Child-Pugh

Child-Pugh C

Description

A 63-year-old HIV-infected female with a history of latent TB, cirrhosis secodary to non-alcoholic steatohepatitis. The patient has been treated with rifabutin 300 mg daily for a 4 month treatment course 9 months prior. Due to a communication error, the patient was restarted on rifabutin 300 mg daily for 3 months while on treatment with elvitegravir/cobicistat, emtricitabine and tenofovir alafenamide. The patient developed a bilateral panuveitis likely due to the inhibitory effect of cobicistat on rifabutin metabolism leading to high concentrations of rifabutin. Rifabutin-associated uveitis has been recognized as a dosage-dependent side effect. This report was published by Toomey C et al. Case rep Ophthalmol 2020.

Clinical Outcome

Toxicity

Drug Interaction Probability Scale (DIPS)

Score

6 - Probable

Editorial Comment

Coadministration is not recommended as it may significantly decrease elvitegravir/cobicistat plasma concentrations, which may result in loss of therapeutic effect and development of resistance. Coadministration of elvitegravir/cobicistat (150 mg/150 mg once daily) and rifabutin (300 mg once daily alone or 150 mg every other day with elvitegravir/cobicistat) decreased elvitegravir Cmin by 67%. Rifabutin exposure was similar to values obtained alone, but 25-O-desacetylrifabutin exposures were 4.8 to 6.3 fold higher. The European SPC suggests that if the combination is needed, to use rifabutin 150 mg 3 times per week on set days (e.g. Monday-Wednesday-Friday) with increased monitoring for rifabutin associated adverse reactions including neutropenia and uveitis due to increased desacetyl rifabutin exposure.

University of Liverpool Recommendation

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

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