clinical cases DDIs

Date of report 29 Jun 2023

Reported case interaction between **Cobicistat** and **Clopidogrel**

Drugs suspected to be involved in the DDI

Perpetrator
Cobicistat

Daily Dose
150 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
July 28, 2016

End date
Sept. 8, 2022

Victim
Clopidogrel

Daily Dose
75 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Aug. 4, 2022

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

Clopidogrel 75 mg/24h acetylsalicylic acid 100mg/24h Atorvastatin 40 mg/24h

Clinical case description

Gender

Male

Age

59

eGFR (mL/min)

60-30

Liver function impairment

No

Description

59 year-old man with HIV diagnosed in 1985. Virologically suppressed since 2006. In June 2022 CD4 count 345/mm3 (17%) and HIV-1 RNA <50 copies/mL. Current ART with TAF/FTC/DRV/cobi since 2016 (previously TDF/FTC + DRV/rtv since 2008).
In August 2022 he was hospitalized because an acute myocardial infarction. After a primary angioplasty, the treatment prescribed was: clopidogrel (600 mg as loading dose and then 75 mg/24h, acetylsalicylic acid 100 mg/24h and atorvastatin 40 mg/24h)
Although no early thrombosis of a coronary stent or other complication was observed after 1 month of cobicistat and clopidogrel coadministration, probably the short period of coadministration, ART was switched to BIC/FTC/TAF to avoid such complications.

Clopidogrel is a prodrug and is converted to its active metabolite via CYPs 3A4, 2B6, 2C19 and 1A2. Coadministration of clopidogrel with potent CYPs 3A4 inhibitors such as cobicistat can decrease the concentration clopidogrel's active metabolite and subsequently the desired effect of clopidogrel.

Clinical Outcome

No unwanted outcome

Editorial Comment

Coadministration of clopidogrel and boosted regimens is contraindicated. Clopidogrel is a prodrug and is converted to its active metabolite via CYPs 3A4, 2B6, 2C19 and 1A2. Exposure of clopidogrel active metabolite was reduced by 96% in HIV-infected patients treated clopidogrel while on a ritonavir- or cobicistat- containing antiretroviral regimen compared to healthy volunteers receiving only clopidogrel. This may result in insufficient platelet inhibition in as much as in 44% of HIV-infected patients. If the booster cannot be avoided, consider safer alternatives such as prasugrel.

University of Liverpool Recommendation

- These drugs should not be coadministered

For more information click here

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