clinical cases DDIs

Date of report 16 Apr 2024

Reported case interaction between **Cobicistat** and **Apixaban**

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
Apixaban

Daily Dose
5 (mg)

Dose adjustment performed
Yes

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

Olanzapine, apixaban (2.5 mg 2x/day)

Clinical case description

Gender

Male

Age

74

eGFR (mL/min)

60-30

Liver function impairment

No

Description

A 74-year-old patient, well controlled on treatment with Elvitegravir/cobi/FTC/TAF, was started on apixaban at a reduced dose (2.5 mg twice daily) for thrombosis in the left leg. The concurrent use of apixaban at a reduced dose was well tolerated with no adverse outcomes. Apixaban is metabolized by CYP3A4 and, to a lesser extent, by CYP1A2, 2C8, 2C9, 2C19 and 2J2. Additionally, apixaban is a substrate of P-gp and BCRP. Elvitegravir/cobicistat inhibits CYP3A4, P-gp and BRCP and therefore increases the exposure of apixaban. The product label for apixaban does not recommend the concomitant use with strong dual CYP3A4 and P-gp inhibitors, although the US label gives the option to use apixaban at a reduced dose (i.e., 2.5 mg) if needed. Of interest, the literature reports case series of people with HIV treated with a reduced dose of apixaban (2.5 mg twice daily) while on

ritonavir or cobicistat boosted regimens, which did not present adverse outcomes.

Clinical Outcome

No unwanted outcome

Editorial Comment

Concentrations of apixaban are expected to increase due to potent CYP3A4 and P-gp inhibition by elvitegravir/cobicistat, thereby increasing the bleeding risk.
This clinical case highlights the safety of an interaction that is becoming increasingly common, that of boosters with the new oral anticoagulants. This patient was started on the adjusted dose of apixaban and received elvitegravir/cobi/FTC/TAF plus half-dose of apixaban for several weeks (at least 2 months) without any adverse outcome.

University of Liverpool Recommendation

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

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