clinical cases DDIs

Date of report 22 Jun 2020

Reported case interaction between **Cobicistat** and **Fluticasone**

Drugs suspected to be involved in the DDI

Perpetrator
Cobicistat

Daily Dose
150 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Oct. 1, 2015

End date
Ongoing

Victim
Fluticasone

Daily Dose
100 (mcg)

Dose adjustment performed
No

Administration Route
Nasal

Start date
June 12, 2019

End date
July 12, 2019

Complete list of drugs taken by the patient

Antiretroviral treatment

Darunavir/Cobicistat

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

Fluticasone, Azelastine

Clinical case description

Gender

Male

Age

48

eGFR (mL/min)

>60

Liver function impairment

No

Description

A 48-year-old man who was diagnosed with HIV in 1997. He had received multiple previous ART regimens and since 2015 he was on treatment with DRV/c (800/150 mg) in monotherapy, maintaining undetectable plasma viral load. In June 2019 he presented with allergic rhinitis, and a nasal spray containing Azelastine hydrochloride 137 mcg and Fluticasone 50 mcg was prescribed (inhaled twice daily) for a month. Despite fluticasone plasma concentrations are expected to be increased in combination with a strong inhibitor of CYP3A4 like cobicistat, no adverse events were observed in this patient.

Clinical Outcome

No unwanted outcome

Editorial Comment

Systemic corticosteroid effects have been reported in patients receiving strong inhibitors of CYP3A4 and inhaled or intranasally administered fluticasone propionate. Coadministration of darunavir/cobicistat and fluticasone is not recommended unless the potential benefit of treatment outweighs the risk of systemic corticosteroid effects. Alternatively, a dose reduction of the glucocorticoid should be considered with close monitoring of local and systemic effects, or a switch to a glucocorticoid which is not a substrate for CYP3A4 (e.g. beclomethasone) could be implemented. The lack of adverse events in this case is likely to be related to the short duration of treatment. There are multiple clinical cases of Cushing syndrome associated primarily with inhaled fluticasone and also with inhaled budesonide associated with boosted antiretroviral therapies. In most cases the toxicity occurred after 3 months or more, even years. There are also some cases after a short time (2-3 weeks) with fluticasone and boosted PIs (St Germain. AIDS Patient Care STDS 2007; Frankel JK. Ann Pharmacother. 2011; Mahlev-Guri K, EACS 2009). It is recommended if it is possible to use beclomethasone and, if it is considered essential to use more potent corticosteroids (especially for a long time), it should be considered to modify the antiretroviral treatment.

University of Liverpool Recommendation

- These drugs should not be coadministered

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