clinical cases DDIs

Date of report 17 May 2024

Reported case interaction between **Efavirenz** and **Sofosbuvir + Velpatasvir**

Drugs suspected to be involved in the DDI

Perpetrator
Efavirenz

Daily Dose
600 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Dec. 1, 2010

End date
Ongoing

Victim
Sofosbuvir + Velpatasvir

Daily Dose
400/100 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date

End date

Dec. 10, 2021 March 4, 2022

Complete list of drugs taken by the patient

Antiretroviral treatment

Efavirenz
Abacavir/Lamivudine

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

Sofosbuvir/velpatasvir

Clinical case description

Gender

Male

Age

48

eGFR (mL/min)

>60

Liver function impairment

No

Description

A 48-year-old man was diagnosed with HIV infection in 2010, during a hospitalization for C. neoformans meningitis, CMV retinitis, and Kaposi sarcoma. Since his diagnosis, he has been undergoing treatment with efavirenz and lamivudine/abacavir and has shown virological suppression.
In December 2021, he was diagnosed with acute hepatitis C (HCV) and was subsequently prescribed treatment with sofosbuvir/velpatasvir. Unfortunately, both treatments were prescribed without consideration of potential drug interactions.
The patient completed a 12-week course of HCV treatment. However, it was later discovered that there had been a drug-drug interaction contraindicating the co-administration of both treatments. It is worth noting that the coadministration

of velpatasvir/sofosbuvir with efavirenz-containing regimens is not recommended due to decreased concentrations of velpatasvir. Despite this, the patient achieved a sustained virological response for HCV, and a follow-up HCV viral load remained undetectable at week 24 post-treatment.

Clinical Outcome

No unwanted outcome

Editorial Comment

Administration of sofosbuvir and velpatasvir with efavirenz/ emtricitabine/ tenofovir disoproxil fumarate resulted in approximate 50% lower velpatasvir exposure, attributable to induction of CYP3A and P-gp. Based on this result, sofosbuvir/ velpatasvir is not recommended for use with efavirenz-containing ARV regimens.
There are small case series of patients who have been treated with antiepileptic drugs with strong inducing properties during HCV DAA therapy (including with sofosbuvir/velpatasvir) and who achieved a sustained virologic response. Although every effort to prevent concomitant use of sofosbuvir/velpatasvir and inducers should be made, these cases, including the one presented here, suggest that HCV cure may still be achieved in patients where coadministration with an inducer cannot be avoided.

University of Liverpool Recommendation

- These drugs should not be coadministered

For more information click here

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