clinical cases DDIs

Date of report 25 Feb 2020

Reported case interaction between **Efavirenz** and **Carvedilol**

Drugs suspected to be involved in the DDI

Perpetrator
Efavirenz

Daily Dose
600 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
June 6, 2017

End date
June 8, 2019

Victim
Carvedilol

Daily Dose
12.5 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Feb. 1, 2019

End date
Ongoing

Complete list of drugs taken by the patient

Antiretroviral treatment

Efavirenz/Emtricitabine/Tenofovir-DF

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

Carvedilol, enalapril

Clinical case description

Gender

Male

Age

41

eGFR (mL/min)

>60

Liver function impairment

No

Description

41-year-old HIV positive patient, known for HIV infection since 2017. Undetectable on EFC/FTC/TDF (first and only regimen). Admitted to cardiology service for service due to diagnosis of hyperphophic cardiomyopathy. Carvedilol and enalapril were prescribed and HIV consultation was requested to evaluate the need for treatment modifications of the ARV regimen. Carvedilol undergoes glucuronidation and additional metabolism via CYP2D6 and CYPs 2C9 and 1A2. Efavirenz could potentially increase carvedilol concentrations via CYP2C9 inhibition or decrease carvedilol concentrations via induction of glucuronidation (UGT1A1), being unknown the net final effect. No interactions were expected with enalapril. EFC/FTC/TDF was decided to be maintained with no side effects observed. The ART regimen was changed some months later due to other reasons (avoid EFV effect on cholesterol).

Clinical Outcome

No unwanted outcome

Editorial Comment

The interaction between efavirenz and carvedilol is one that has been difficult to predict due to the potential for both induction (UGT1A1) and inhibition (CYP2C9). This case report is helpful and lends some support to the recommendation of 'no a priori dosage adjustment' that is currently in the DDI resource www.hiv-druginteractions.org.

University of Liverpool Recommendation

⚠ Potential interaction likely to be of weak intensity. Additional action/monitoring or dosage adjustment is unlikely to be required

For more information click here