clinical cases DDIs

Date of report 24 Jun 2019

# Reported case interaction between **Tenofovir-AF** and **Primidone**

## Drugs suspected to be involved in the DDI

Victim
**Tenofovir-AF**

Daily Dose
25 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
April 27, 2018

End date
Ongoing

Perpetrator
**Primidone**

Daily Dose
250 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Unknown

End date
Ongoing

## Complete list of drugs taken by the patient

Antiretroviral treatment

Emtricitabine/Tenofovir-AF
Raltegravir

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

Furosemide Omeprazole Pregabalin Primidone Quinine Ranitidine Co-dydramol (dyhydrocodeine / paracetamol) Ibuprofen (topical gel) Metoclopramide Dapsone

## Clinical case description

Gender

Female

Age

67

eGFR (mL/min)

>60

Liver function impairment

No

Description

Patient has been taking primidone for tremor for a number of years now. Due to reduced bone mineral density her anti-retroviral regimen was switched to Descovy (tenofovir alafenamide / emtricitabine) and raltegravir in April 2018. HIV-druginteractions website reports "Primidone is metabolised by CYP3A4 to the active metabolite phenobarbital. Phenobarbital induces P-gp and is expected to decrease tenofovir alafenamide exposure, leading to loss of therapeutic effect and development of resistance." She has maintained an undetectable viral load over the past year.

## Clinical Outcome

## No unwanted outcome

## Editorial Comment

Despite coadministration has not been studied, this interaction can be considered as Mayor and it is NOT recommended to combine both drugs because antiretrovirals efficacy can be compromised. Primidone is metabolised by CYP3A4 to the active metabolite phenobarbital. Phenobarbital, a P-gp inducer, is expected to decrease tenofovir alafenamide exposure, which can lead to loss of efficacy and even though development of resistance and it is not recommended (Descovy Summary of Product Characteristics, Gilead Sciences Ltd, April 2016; Descovy US Prescribing Information, Gilead Sciences Inc, April 2016.) Alternative medications for tremor, including beta blockers, other anticonvulsants or benzodiazepines should be considered, and if this is not possible, a change in the antiretroviral backbone is mandatory, avoiding the use of tenofovir alafenamide. Despite the absence of initial complications it should not make us forget that it is a major interaction and it should be avoided.

## University of Liverpool Recommendation

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

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