clinical cases DDIs

Date of report 29 May 2019

Reported case interaction between **Raltegravir** and **Dietary supplements**

Drugs suspected to be involved in the DDI

Victim
Raltegravir

Daily Dose
1200 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Unknown

End date
May 2, 2019

Perpetrator
Dietary supplements

Daily Dose
n/a (gr)

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

Low calorie, [vitamin & mineral] fortified meal replacements (meals and shakes)

Clinical case description

Gender

Male

Age

47

eGFR (mL/min)

>60

Liver function impairment

No

Description

The patient commenced meal replacement shakes and calorie restricted foods, fortified with vitamins and minerals to aid weight loss in early 2019. These replaced all meals and were taken throughout the day. Subsequently a detectable viral load was measured over three samples in April and May 2019, where the viral load had been previously undetectable for 2 years. On switching from Raltegravir to Dolutegravir and leaving appropriate time separation between Dolutegravir and the meal replacements the following viral load was undetectable.

Clinical Outcome

Loss of efficacy

Drug Interaction Probability Scale (DIPS)

Score

3 - Possible

Editorial Comment

Co-administration of raltegravir (RAL) with antacids containing divalent metal cations may reduce RAL absorption by chelation, resulting in a decrease of RAL plasma levels. Co-administration of RAL 1200 mg once daily with aluminium/ magnesium and calcium carbonate containing antacids are likely to result in clinically meaningful reductions in the plasma trough levels of raltegravir. Therefore, co-administration of aluminium/magnesium and calcium carbonate containing antacids with RAL 1200 mg once daily is not recommended. (Isentress Summary of Product Characteristics, Merck Sharp & Dohme Ltd, March 2019). If RAL 400 mg twice daily is used, antacids containing aluminium and magnesium are also contraindicated (even when separated 6h, RAL Cmin decreased about 50%), but NO dose adjustment is required with calcium (1000 mg x 3 tabs) as this interaction is not considered clinically meaningful (raltegravir Cmin decreased about 32%). This difference is mainly due to the lower Cmin with raltegravir 1,200 mg once daily compared to 400 mg twice daily (107 vs 142 nM, respectively) (https://www.accessdata.fda.gov/scripts/cder/daf/index.cfm?event=overview.process&ApplNo=022145).

University of Liverpool Recommendation

N/A