clinical cases DDIs

Date of report 11 Jul 2022

Reported case interaction between **Darunavir** and **Melissa officinalis**

Drugs suspected to be involved in the DDI

Darunavir

Daily Dose
150 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Feb. 6, 2017

End date
Ongoing

Melissa officinalis

Daily Dose
300 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Aug. 5, 2019

End date
Unknown

Complete list of drugs taken by the patient

Antiretroviral treatment

Cobicistat
Emtricitabine/Tenofovir-DF

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

Melissa Officinalis

Clinical case description

Gender

Male

Age

50

eGFR (mL/min)

>60

Liver function impairment

No

Description

This is a case of a male MSM patient, 50 years old, Caucasian, with no liver and kidney impairment, high 180 cm, weight 96 kg, BMI=29.6 kg/m^2 (overweight). Since 2017, he is on his current antiretroviral treatment, as follows: darunavir/cobicistat (Rezolsta®) plus emtricitabine/tenofovir disoproxil fumarate (200/300 mg QD). Since the introduction of the current treatment, he was undetectable and his CD4 T-cells count was over 600 cells/mm^3. In 2019 he was diagnosed with Metabolic syndrome. In August 2019, together with his standard antiretroviral treatment decided to take an herbal supplement lemon balm (Melissa officinalis), known as a herbal supplement for the treatment of insulin resistance and dyslipidemia. He refused antidiabetic treatment, as well as lipid-lowering agents. He started a diet

and become much more physically active and stopped smoking. He was taking lemon balm tablets 300 mg BID standardized to 7% Rosmarinic acid and 14% Hydroxycinnamic acids (BID). According to the literature review, there were not much data about DDIs in humans on cART taking lemon balm. Thus, after achieving a steady-state concentration of lemon balm, TDM was performed using validated high-performance liquid chromatography (HPLC) assay and it showed darunavir plasma concentration of C_{trough} = 521,519 ng/mL. So, we concluded that there is no clinically relevant drug-drug interaction between lemon balm and darunavir.

Clinical Outcome

No unwanted outcome

Editorial Comment

Many patients refuse taking pharmacological treatments for conditions that require approved drugs. However, the so-called ‘natural therapies’ are perceived as less aggressive or toxic for the body and are used frequently without any medical control, or even without informing the physician. For many of them (as in this case for Melissa officinalis), information on how these products may interact with antiretroviral drugs is not available. Melissa officinalis is believed to have carminative, sedative, antibacterial and antiviral properties. This reported clinical case suggests no

relevant impact of Melissa officinalis on Darunavir plasma concentrations.

University of Liverpool Recommendation

N/A