

Date of report 27 Feb 2020

# Reported case interaction between **Atazanavir** and **Naringin**

# Drugs suspected to be involved in the DDI

Victim

**Atazanavir** 

Daily Dose

300 (mg)

Dose adjustment performed

No

Administration Route

Oral

Start date

Unknown

End date

Unknown

Perpetrator

**Naringin** 

Daily Dose

Unknown

Dose adjustment performed

No

Administration Route

Oral

Start date

End date

Unknown

Unknown

## Complete list of drugs taken by the patient

Antiretroviral treatment

Emtricitabine/Tenofovir-DF Atazanavir (unboosted)

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

Naringin-copntaining CAM, sinetrol, fluoxetine, pseudoephedrine

# **Clinical case description**

Gender Age

Female 40

eGFR (mL/min) Liver function impairment

>60 No

#### Description

Patient failing antiretroviral therapy with atazanavir plus tenofovir/emtricitabine (mean HIV RNA: 149 copies/mL). He referred that he had recently started using a naringin-containing supplement, claimed to be a fat-burning accelerator. TDM revealed suboptimal atazanavir concentration during concomitant treatment with naringin that increased after discontinuation (85 versus 719 ng/mL). This case has been published by Cattaneo D, et al. in Obesity (Silver Spring). 2018 Aug;26(8):1251-1252.

## **Clinical Outcome**

## **Loss of efficacy**

## **Drug Interaction Probability Scale (DIPS)**

Score

#### 7 - Probable

#### **Editorial Comment**

Weight-loss drugs should be used with caution in HIV-infected patients treated with antiretroviral drugs because of the risk of virologic failure. Naringin is a flavanone-7-O-glycoside that inhibits the activity of carrier proteins (p-glycoprotein and organic-anion-transporting polypeptide), ultimately resulting in impaired drug absorption (Shirasaka Y, Li Y, Shibue Y, et al. Concentration-dependent effect of naringin on intestinal absorption of beta(1)-adrenoceptor antagonist talinolol mediated by p-glycoprotein and organic anion transporting polypeptide (OATP). Pharm Res 2009; 26: 560- 567.)

# **University of Liverpool Recommendation**

N/A