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
Unknown

End date
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

Female

Age

40

eGFR (mL/min)

>60

Liver function impairment

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