clinical cases DDIs

Date of report 20 Feb 2020

Reported case interaction between **Atazanavir** and **Orlistat**

Drugs suspected to be involved in the DDI

Victim
Atazanavir

Daily Dose
300 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
June 1, 2010

End date
Ongoing

Perpetrator
Orlistat

Daily Dose
180 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
May 1, 2015

End date
June 1, 2015

Complete list of drugs taken by the patient

Antiretroviral treatment

Atazanavir (with Ritonavir or Cobicistat)
Emtricitabine/Tenofovir-DF

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

No other drugs

Clinical case description

Gender

Female

Age

41

eGFR (mL/min)

>60

Liver function impairment

No

Description

An HIV-infected woman in her early forties was on stable ART with 300/100 mg of atazanavir/ritonavir once daily plus tenofovir/emtricitabine (since 2010). Her HIV-RNA in plasma had not been detectable (<37 copies/mL) for years and her CD4+ cell count was always >800 cells/μL. At her scheduled follow-up visit in June 2015, her HIV-RNA level had risen to 120 copies/mL (the test repeated 1 week later resulted in 440 copies/mL). An HIV genotype test performed on the second blood sample showed no antiretroviral drug resistance mutations. The patient reported that she had been perfectly adherent to ART but that she had begun taking orlistat, purchased over-the-counter from her local pharmacy in May 2015, in order to lose weight (her BMI was 27.2 kg/m2). She took three 60 mg tablets daily at each meal and, as expected, she experienced episodes of mild diarrhoea,

particularly after ingesting fatty foods. Orlistat was discontinued and the patient's HIV-RNA level had returned to undetectable when tested 2 months later. At the last available follow-up (November 2015), the patient's plasma HIV-RNA and CD4+ T cell count were <37 copies/mL and 1172 cells/µL, respectively. Atazanavir trough evaluations performed immediately before stopping orlistat evidenced drug concentrations (50 ng/mL) that were subtherapeutic according to available literature. Notably, such concentrations were remarkably low compared with trough atazanavir values measured about 1 year earlier (210 ng/mL), as well as with atazanavir concentrations determined 2 months after orlistat discontinuation (195 ng/mL). This case was published by Gervasioni C, et al. in J Antimicrob Chemother. 2016 Jun;71(6):1739-41.

Clinical Outcome

Loss of efficacy

Drug Interaction Probability Scale (DIPS)

Score

8 - Probable

Editorial Comment

Orlistat reduces dietary fat absorption and may affect the absorption of antiretrovirals (especially if lipophilic). Although there are no specific data in this combination available,

orlistat should only be used with atazanavir if separated by 4-5 hours. [Note: this interaction is not specific for atazanavir, but for any medication taken with orlistat.]

University of Liverpool Recommendation

⚠ Potential interaction likely to be of weak intensity. Additional action/monitoring or dosage adjustment is unlikely to be required

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