clinical cases DDIs

Date of report 17 Jun 2019

Reported case interaction between **Cobicistat** and **Red yeast rice (monacolin)**

Drugs suspected to be involved in the DDI

Perpetrator

Cobicistat

Daily Dose

150 (mg)

Dose adjustment performed

No

Administration Route

Oral

Start date

Unknown

End date

Ongoing

Victim

Red yeast rice (monacolin)

Daily Dose

672 (mg)

Dose adjustment performed

No

Administration Route

Oral

Start date

End date

Nov. 15, 2018 Dec. 12, 2018

Complete list of drugs taken by the patient

Antiretroviral treatment

Darunavir/Cobicistat

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

Red yeat rice, rabeprazol, escitalopram, lormetazepam

Clinical case description

Gender

Female

Age

53

eGFR (mL/min)

>60

Liver function impairment

No

Description

HIV infection on treatment with Darunavir/cobicistat (800/150 mg qd). Adherence 100%. HIV RNA load in plasma <50 copies/mL. Dyslipemia (LDL 166 mg/dL), reluctant to receive treatment with statins. On Dec 2018 the patient had been taking red yeast rice capsules (2 caps/day) for 4 weeks. Red yeast rice contains monacolin, which molecular structure is identical to lovastatin (contraindicated with CYP3A4 inhibitors due to increased exposure and risk of rhabdomyolysis). Although liver enzyme and CPK levels were within the normal range in this patient, red yeast rice capsules were discontinued and the patient started lipid lowering therapy with atorvastatin 20 mg qd.

Clinical Outcome

No unwanted outcome

Editorial Comment

Red yeast rice is a fermented rice product containing, among others, monacolin K. This natural component has the same chemical structure as the statin lovastatin which undergo CYP3A4 metabolism (Klimek M et al. P&T 2009). Thus, strong CYP3A4 inhibitors like cobicistat can significantly increase the exposure of monacolin K (lovastatin) and thereby increase the risk of rhabdomyolysis. The literature reports two cases of rhabdomyolysis resulting from drug-drug interactions with red yeast rice (Russo R et al. Curr Drug Saf 2016; Prasad GV et al. Transplantation 2002). Although, the use of red yeast rice and cobicistat did not have deleterious consequences in this report, this association should be avoided given the potential risk of rhabdomylolysis. The other issue is that dietary supplements like red yeast rice do not undergo adequate testing so that product uniformity, purity and safety cannot be guaranteed.

University of Liverpool Recommendation

- These drugs should not be coadministered

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