clinical cases DDIs

Date of report 11 Jul 2019

Reported case interaction between **Ritonavir** and **Atorvastatin**

Drugs suspected to be involved in the DDI

Perpetrator
Ritonavir

Daily Dose
200 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Unknown

End date
Ongoing

Victim
Atorvastatin

Daily Dose
40 (mg)

Dose adjustment performed
Yes

Administration Route
Oral

Start date
Jan. 1, 2019

End date
Ongoing

Complete list of drugs taken by the patient

Antiretroviral treatment

Darunavir (with Ritonavir or Cobicistat)
Ritonavir
Etravirine
Raltegravir
Maraviroc

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

Atorvastatin, Fenofibrate, Insulin, Repaglinide, AAS, Gabapentin, Doluxetine, omperazole

Clinical case description

Gender

Male

Age

72

eGFR (mL/min)

>60

Liver function impairment

No

Description

HIV infection known since 1995. Highly ART-experience with extensive resistance-associated mutations pattern. On ART with darunavir (600 mg bid), ritonavir (100 mg bid), etravirine (200 mg bid), raltegravir (400 mg bid) and maraviroc (300 mg bid). HIV-1 RNA <50 copies/mL. Diabetes mellitus, dyslipidemia and peripheral artery disease (intermittent claudication 100 m). On stable (>2 years) lipid lowering treatment with atorvastatin (20 mg qd) plus fenofibrate (150 mg qd). In December 20189 LDL-cholesterol levels 124 mg/dL (target <70 mg/dL). Atorvastatin dose was increased to 40 mg qd. In June 2019 the patient referred good tolerance. AST/ALT/CK levels remained with the normal range, and LDL-

cholesterol levels had decreased to 88 mg/dL. Despite increase in atorvastatin exposure when combined with ritonavir. No adverse event was observed in this case. However, a daily dose of 40 mg atorvastatin should not be exceeded, and careful safety monitoring is recommended in this setting.

Clinical Outcome

No unwanted outcome

Editorial Comment

Atorvastatin is metabolized by CYP3A4. Coadministration with ritonavir is expected to increase atorvastatin concentrations. If the use of atorvastatin is considered necessary, start with the lowest dose of atorvastatin and titrate carefully while monitoring for safety. A daily dose of 40 mg atorvastatin should not be exceeded with careful safety monitoring. Suboptimal cardiovascular risk management has been described in HIV patients. Intensification of lipid lowering therapy and control of other cardiovascular risk factors may be required (Rosan A van Zoest, et al. Eur J Prev Cardiol. 2017 Aug; 24(12): 1297–1307).

University of Liverpool Recommendation

■ Potential interaction - may require close monitoring, alteration of drug dosage or timing of administration

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