



Date of report 27 Feb 2020

## Reported case interaction between **Ritonavir** and **Clopidogrel**

### Drugs suspected to be involved in the DDI

Perpetrator

**Ritonavir**

Daily Dose

100 (mg)

Dose adjustment performed

No

Administration Route

Oral

Start date

April 8, 2016

End date

Ongoing

Victim

**Clopidogrel**

Daily Dose

75 (mg)

Dose adjustment performed

No

Administration Route

Oral

Start date

Nov. 19, 2015

End date

Nov. 30, 2016

## Complete list of drugs taken by the patient

Antiretroviral treatment

Ritonavir

Darunavir (with Ritonavir or Cobicistat)

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

clopidogrel, aspirin, olanzapine, diazepam, pantoprazole, escitalopram, buprenorphin

## Clinical case description

Gender

Male

Age

56

eGFR (mL/min)

>60

Liver function impairment

No

Description

This patient was a previous intravenous drug user, living with HIV since 2001. Chronic HCV-associated hepatitis with F1 fibrosis. Incomplete adherence in the past, and the selection of RAMs. On DRV/r monotherapy since 2013, in 2015 he suffered from an acute myocardial infarction and he was treated with coronary stent and antiplatelet therapy. Because of the known interaction between clopidogrel and ritonavir, cART was switched to dolutegravir plus lamivudine and rilpivirine. After 3 months on the new cART the patient had severe neuropsychiatric intolerance, and he was switched back to darunavir/ritonavir. Given the impossibility to obtain other antiplatelet agents the patient was followed closely until clopidogrel withdrawal (9 months later). No new coronary syndrome, symptoms or stent stenosis was

observed during the 9 months nor in the available follow up afterwards (3.5 years).

## Clinical Outcome

**No unwanted outcome**

## Editorial Comment

Clopidogrel is administered as a prodrug that is metabolized to its active form through the CYP3A4 pathway. Inhibition of CYP3A4 by ritonavir may lead to subtherapeutic plasma concentrations of active clopidogrel, putting the patient at risk of a recurrence of his coronary disease. In this scenario it is recommended either to switch antiretroviral treatment to unboosted regimens, without ritonavir or cobicistat, or to look for alternative antiplatelet agents whose antiaggregant effects are not affected by ritonavir, such as prasugrel.

## University of Liverpool Recommendation

- These drugs should not be coadministered

For more information [click here](#)