Date of report 30 May 2024

Reported case interaction between **Rilpivirine** and **Clarithromycin**

Drugs suspected to be involved in the DDI

Victim
Rilpivirine

Daily Dose
25 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
April 3, 2022

End date
Ongoing

Perpetrator
Clarithromycin

Daily Dose
1000 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
April 1, 2024

End date
April 4, 2024

Complete list of drugs taken by the patient

Antiretroviral treatment

Dolutegravir/Rilpivirine

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

Ceftriaxone

Clinical case description

Gender

Male

Age

57

eGFR (mL/min)

>60

Liver function impairment

No

Description

A 57-year-old male with HIV has been on dolutegravir/rilpivirine treatment for 2 years, maintaining virological suppression and immunological control. He presented to the emergency department with a 4-day history of fatigue, weakness, and persistent fever. At the emergency department, he was diagnosed with pneumonia and admitted for treatment with ceftriaxone 2 g every 24 hours intravenously and clarithromycin 500 mg every 12 hours orally. On the fourth day of treatment with clarithromycin, he was evaluated by the HIV Unit, presenting a normal electrocardiogram and no clinical consequences. A decision was made to discontinue clarithromycin.
Clarithromycin is a strong inhibitor of CYP3A4, known to inhibit the metabolism of certain medications, including rilpivirine. This can potentially lead to increased levels of

rilpivirine in the bloodstream, which may increase the risk of adverse effects, including prolongation of the QTc interval. Therefore, caution should be exercised when combining clarithromycin with rilpivirine, and close monitoring for any signs of QTc prolongation or other adverse effects is recommended. Alternative antibiotics, such as azithromycin, that do not interact with rilpivirine should be considered. The use of macrolides along with rilpivirine should be given high consideration due to the potential adverse events related to QTc prolongation.

Clinical Outcome

No unwanted outcome

Editorial Comment

Clarithromycin is a potent inhibitor of CYP3A4. Concomitant administration with rilpivirine may elevate RPV plasma concentrations, potentially increasing the risk of QTc interval prolongation. However, QTc interval prolongation has been associated with supratherapeutic doses of RPV. Achieving equivalent rilpivirine concentrations through interaction with clarithromycin is improbable. Nonetheless, it is advisable to perform an ECG when coadministering clarithromycin and RPV to monitor for potential QTc interval prolongation.
Consider alternatives such as azithromycin.

University of Liverpool Recommendation

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

For more information click here

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