clinical cases DDIs

Date of report 04 Jul 2024

Reported case interaction between **Lopinavir/Ritonavir** and **Terfenadine**

Drugs suspected to be involved in the DDI

Perpetrator
Lopinavir/Ritonavir

Daily Dose
800 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Unknown

End date
Unknown

Victim
Terfenadine

Daily Dose
180 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Unknown

End date
Unknown

Complete list of drugs taken by the patient

Antiretroviral treatment

Lamivudine
Tenofovir-DF
Lopinavir/ritonavir

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

Terfenadine 60 mg 3x/day, prednisone 30 mg/day,

Clinical case description

Gender

Female

Age

38

eGFR (mL/min)

>60

Liver function impairment

No

Description

A 38-year-old female on long-term antiretroviral treatment with lopinavir/r + lamivudine + TDF presented a loss of consciousness and convulsion during her sleep. She was admitted to the emergency department. The heart monitoring showed ventricular fibrillation which was resolved with defibrillation, restoring her consciousness. She reported being prescribed terfenadine and prednisone for urticaria. After 3 days on this medication, she suddenly lost her consciousness and presented alterations of the electrocardiogram characterized by QT prolongation and torsade pointes which occurred several times for a period of 2 days. This clinical presentation was attributed to the interaction between lopinavir/ritonavir and terfenadine. Ritonavir strongly inhibits CYP3A4 which is the main enzyme metabolizing terfenadine.

This case was published by Mu X et al. Front Pharmacol 2023.

Clinical Outcome

Toxicity

Drug Interaction Probability Scale (DIPS)

Score

7 - Probable

Editorial Comment

Coadministration of lopinavir and terfenadine is contraindicated due to the potential for serious and/or life-threatening reactions such as cardiac arrhythmias.
This clinical case is of special interest because the interaction it presents poses a risk of alterations in cardiac electrophysiology, such as prolonging the QT interval. Such interactions can go unnoticed or be underestimated, despite their potential seriousness, which can compromise the patient's life, as illustrated in this case. Therefore, it is important to emphasize the need for special care with this type of interaction.

University of Liverpool Recommendation

- These drugs should not be coadministered

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