clinical cases DDIs

Date of report 29 Jun 2022

Reported case interaction between **Ritonavir** and **Mycophenolate**

Drugs suspected to be involved in the DDI

Perpetrator
Ritonavir

Daily Dose
200 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
March 27, 2022

End date
March 31, 2022

Victim
Mycophenolate

Daily Dose
1500 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
Unknown

End date
Ongoing

Complete list of drugs taken by the patient

Antiretroviral treatment

Ritonavir

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

Mycophenolate, Nirmatrelvir, Entecavir, alfuzosin, acyclovir

Clinical case description

Gender

Male

Age

77

eGFR (mL/min)

60-30

Liver function impairment

Yes

Child-Pugh

Child-Pugh A

Description

A 77 year old patient that received liver transplant (for HBV chronic hepatitis) 25 years before was diagnosed with COVID-19. Given the high risk he was treated with nirmatrelvir/ritonavir (300/100 bid) for 5 days and no progression of the SARS-COV-2 associated diseases was observed. Despite the potential interaction with mycophenolate we observed no side effect and no change in AST/ALT/GGT/coagulation ikndexes. At 14 and 30 days follow up patient was in good health with no symptoms nor altered liver function tests.

Clinical Outcome

No unwanted outcome

Editorial Comment

Mycophenolate mofetil is a prodrug of mycophenolic acid (MPA). MPA undergoes glucuronidation. Co-administration of inducers of glucuronidation, such as ritonavir, could reduce mycophenolate levels, but this interaction is not espected to be intense. Given the short duration of nirmatrelvir/ritonavir (5 days), the COVID-19 Liverpool website indicates that no dose adjustment would be necessary and establishes the potential risk of interaction as weak, which is confirmed by this clinical case. In contrast, another drug the patient is taking, alfuzosin, is contraindicated with nirmatrelvir/ritonavir because of the risk of increased alfuzosin concentrations and hypotension. The author of the report confirmed that alfuzosin was replaced 24 hours before paxlovid administration to tamsulosin 0.4 mg. One episode of postural vertigo one on the last day (with mild hypotension (100/60)) was reported. It should be notted that concomitant administration of tamsulosin with potent CYP3A4 inhibitors may result in increased exposure to tamsulosin.

University of Liverpool Recommendation

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

For more information click here

Personal information from the specialist

Name
Andrea

Surname
Calcagno

Institution
University of Torino

Country
IT