clinical cases DDIs

Date of report 14 Feb 2020

Reported case interaction between **Cobicistat** and **Simvastatin**

Drugs suspected to be involved in the DDI

Perpetrator
Cobicistat

Daily Dose
150

Dose adjustment performed
No

Administration Route
Oral

Start date
Unknown

End date
Unknown

Victim
Simvastatin

Daily Dose
Unknown

Dose adjustment performed
No

Administration Route
Oral

Start date
Unknown

End date
Unknown

Complete list of drugs taken by the patient

Antiretroviral treatment

Elvitegravir/Cobicistat/Emtricitabine/Tenofovir-AF

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

Simvastatin

Clinical case description

Gender

Male

Age

40

eGFR (mL/min)

>60

Liver function impairment

No

Description

A middle-aged HIV-infected homosexual patient consulted his treating physician because of progressive fatigue. His antiretroviral therapy (ART) regimen included indinavir (IDV), lamivudin (3TC) and stavudine (d4T) and his only co-medication was simvastatin. His last CD4 cell count was 1033/µl and his HIV viral load had been suppressed for the previous 8 years. Physical examination revealed a diffuse maculopapular rash and scleral icterus. Blood tests showed markedly elevated transaminases [alanine aminotransferase (ALT) >1000 U/l, aspartate aminotransferase (AST) >1000 U/l], slightly elevated cholestasis parameters and a C-reactive protein of 61 mg/l. Hepatitis A virus (HAV) IgM and hepatitis C virus (HCV) antibody tests were both positive whereas hepatitis B virus (HBV) markers were negative. Testing of a previous stored serum sample secured the diagnoses of acute HAV and chronic HCV infections. To simplify the ART regimen,

the treating physician proposed a switch to a single-tablet regimen including tenofovir alafenamide (TAF), emtricitabine (FTC), cobicistat (COBI) and elvitegravir (EVG). Two weeks later, the patient presented with increased fatigue, severe muscle pain and reported reduced micturition and a dark discoloration of the urine. Laboratory analyses showed severe renal dysfunction [estimated glomerular filtration rate (eGFR) 12 ml/min, potassium 6.1 mmol/l], very high transaminases (ALT > 2279 U/L, AST > 5193 U/L) and creatinine-kinase above 200 000 U/l. The patient was diagnosed with rhabdomyolysis and secondary acute renal failure and referred for dialysis. After discontinuation of ART and simvastatin, creatinine-kinase and transaminase levels decreased rapidly so that, after 2 months, dialysis was no longer needed. This case was published by Perrone C and colleasgues in AIDS. 2018 Mar 13;32(5):676-678. doi: 10.1097/QAD.0000000000001746

Clinical Outcome

Toxicity

Drug Interaction Probability Scale (DIPS)

Score

6 - Probable

Editorial Comment

Co-administration is contraindicated due to the potential for serious or life-threatening adverse reactions, such as myopathy, including rhabdomyolysis. Genvoya Summary of Product Characteristics, Gilead Sciences International Ltd, November 2015.

University of Liverpool Recommendation

- These drugs should not be coadministered

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