clinical cases DDIs

Date of report 23 Sep 2020

Reported case interaction between **Cobicistat** and **Ecstasy (MDMA)**

Drugs suspected to be involved in the DDI

Perpetrator
Cobicistat

Daily Dose
150 (mg)

Dose adjustment performed
No

Administration Route
Oral

Start date
July 24, 2016

End date
Ongoing

Victim
Ecstasy (MDMA)

Daily Dose
Unknown

Dose adjustment performed
No

Administration Route
Oral

Start date
Aug. 15, 2015

End date
Aug. 15, 2015

Complete list of drugs taken by the patient

Antiretroviral treatment

Elvitegravir/Cobicistat/Emtricitabine/Tenofovir-DF

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

No other drugs

Clinical case description

Gender

Male

Age

29

eGFR (mL/min)

>60

Liver function impairment

No

Description

A 29-year-old man consulted in the emergency department for fever. He referred to having been in a nightclub and having consumed 1 mdma pill. 6 hours later he started with sweats, fever (39.1 C at ER). The blood tests revealed creatinin kinase 225 UI/l (reference <170U/l) with normal renal function and no other alterations. No signs of infection were detected. Initially was oriented as heat stroke and support measures started. The patient evolved well and discharged after 24h. Hyperthermia is a severe complication associated with the recreational use of 3,4-methylenedioxymethamphetamine (MDMA, Ecstasy). Usually the risk is dose dependent but the presence of high temperature is also needed. This patient reported consuming MDMA 1 pill (unknown dose) and was under Elvitegravir/ cobicista/Emtricitabine/Tenofovir-DF with the addition of being in a high temperature enviroment. The interaction between

cobicistat and MDMA has not been studied but MDMA is metabolized mainly by CYP2D6. Although cobicistat is a weak CYP2D6 inhibitor the interaction is possible. And heat stroke is a potential high risk complication.

Clinical Outcome

Toxicity

Drug Interaction Probability Scale (DIPS)

Score

5 - Probable

Editorial Comment

This is an important case highlighting potential DDI between ART components and commonly used substances in the context of ChemSex. Indeed, national and international guidelines have been adapted in recent years to give priority to ART regimens not containing pharmacokinetic enhancers, to avoid potentially serious DDI with other drugs, but also with recreational ilicit substances. Before starting ART, ChemSex use should be deeply investigated and consider avoiding cobicistat/ritonavir in ChemSex users.

University of Liverpool Recommendation

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

For more information click here