



Date of report 20 Jul 2021

Reported case interaction between
Ritonavir and **Anabolic steroids/
Androgen agonists**

Drugs suspected to be involved in the DDI

Perpetrator

Ritonavir

Daily Dose

100 (mg)

Dose adjustment performed

No

Administration Route

Oral

Start date

Unknown

End date

April 27, 2021

Victim

**Anabolic steroids/
Androgen agonists**

Daily Dose

Unknown

Dose adjustment performed

No

Administration Route

Oral

Start date

End date

April 13, 2021

April 28, 2021

Complete list of drugs taken by the patient

Antiretroviral treatment

Raltegravir

Tenofovir-DF

Darunavir (with Ritonavir or Cobicistat)

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

Osta Max bodybuilding supplement (Ostarine)

Clinical case description

Gender

Male

Age

45

eGFR (mL/min)

>60

Liver function impairment

No

Description

Acute drug-induced liver injury (DILI), with ALT rising to >1500, AST to 181 IU/L. Liver function tests normalized after discontinuing Osta Max. Osta Max contains ostarine- a selective androgen receptor modulator, which is a UGT and CYP 3a substrate.

Clinical Outcome

Toxicity

Drug Interaction Probability Scale (DIPS)

Score

8 - Probable

Editorial Comment

Ostarine is a UGT and CYP 3a substrate. Inhibition of CYPs by RTV may increase the risk of drug-induced liver injury, as it happened in this patient.

University of Liverpool Recommendation

N/A