INTRODUCTION

• CYP3A4 is the most prevalent cytochrome P450 (CYP) enzyme in the liver
• It is used by the majority of medications for their metabolism and elimination from the body
• Inhibition of CYP3A4 can result in the accumulation of drug concentrations increasing the risk for side effects and possible toxicity

CASE

• 54 year old female presented with one week history of increasing neck and face swelling, fatigue and easy bruising
• PMH: HIV infection, previous TB, bronchiectasis, chronic hip pain
• DH: Rezolsta 800 mg/150 mg (Darunavir + Cobicistat) and Dolutegravir 50 mg once a day
• 2 weeks prior to admission she received an intracapsular injection of triamcinolone acetonide (equivalent to hydrocortisone 200mg) for hip pain
• 2 years ago she had received similar intracapsular injection but she was not on Rezolsta at the time
• On examination she appeared Cushingoid with a round face, facial plethora and dorsocervical fat pad

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
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</thead>
<tbody>
<tr>
<td>Random cortisol</td>
<td>&lt;40nmol/L</td>
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<tr>
<td>30min cortisol post ACTH</td>
<td>165nmol/L</td>
</tr>
<tr>
<td>24hr urine cortisol</td>
<td>85nmol/L (20-180nmol/L)</td>
</tr>
<tr>
<td>ACTH</td>
<td>1.3pmol/L (2.2-17.6pmol/L)</td>
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</tbody>
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• The clinical picture was explained by exogenous steroid interference from triamcinolone
• Due to persistent symptoms her antiretroviral regimen was temporarily changed to facilitate metabolism of triamcinolone
• The patient required several doses of hydrocortisone to cover intercurrent illness
• Recovery of endogenous HPA axis was observed 10 weeks after the initial injection
• Her cushingoid features improved by 3 months
• Subsequently she has been seen at the clinic twice with normal short synachten test

DISCUSSION

• Iatrogenic Cushing’s syndrome secondary to the antiretroviral ritonavir is well recognised
• In this case Cushing’s syndrome was related to an additional antiretroviral, cobicistat, which is known to be a strong inhibitor of the CYP3A4 metabolism
• At the same time patient manifested secondary adrenal insufficiency, requiring hydrocortisone for intercurrent illness
• Systemic complications from intracapsular corticosteroids are rare but when used simultaneously with cobicistat can lead to iatrogenic Cushing’s syndrome and adrenal suppression
• This case highlights the importance of taking a robust drug history and considering potential drug interactions in patients on antiretroviral treatment
• It’s important to consider that not all electronic systems will have access to specialist prescribing records, that sit outwith standard primary care prescribing systems