

Vasculitis and anaemia after starting dolutegravir

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BACKGROUND HISTORY

- Recently returned from living in USA
- 45 year old man who has sex with men
- HIV diagnosed 2007.
- ART 2007: TDF/FTC/fosamprenavir/ritonavir
- ART changed 2008: TDF/FTC/efavirenz, ceased in 2010 due to sleep disturbance. No ART since then.
- HIV genotypes in 2007 and 2014 showed no major resistance mutations.
- HLA-B57*01 negative
- Other PMHx:
 - Resolved HBV (HBsAg negative)
 - Gastro-oesophageal reflux

Several STIs in February 2014:

- Urethritis: Mycoplasma genitalium, chlamydia and gonorrhoea. Rx: azithromycin 1g PO stat + ceftriaxone 500mg IM stat.
- Syphilis. Recent infection. Peak RPR 16.
- Rx: benzathine penicillin 1.8g IM stat. RPR 4 in August 2014.
- Intestinal amoebiasis. Rx: tinidazole + paramomycin

Hospital admission in July 2014 with severe diarrhoea:

- Stool: Campylobacter fetus and Shigella spp. Rx: erythromycin, then ceftriaxone and metronidazole.
- CT abdo/pelvis: Mesenteric, paraaortic and inguinal borderline lymphadenopathy and periportal oedema.

COMMENCEMENT OF DOLUTEGRAVIR

Presents in August 2014 for re-starting of ARVs:

- HIV viral load 800,000 copies/ml
- CD4 374 (15%)
- Commenced TDF/FTC/dolutegravir

Day 1+2: no problems

Day 3: vomiting and loose diarrhoea. Self-ceased ARVs after dose 3.

Day 4: Tender rash on upper limbs and neck, gradually spreading. Mild fever (T 37.7C).

Also noted to have new-onset anaemia (Hb 84).

Day 7: Presented to hospital. Noted to be febrile (T38.3C). Self-discharged 24 later.

INVESTIGATION OF RASH

- Skin biopsy: **Leucocytoclastic vasculitis**
- HCV Ab negative at time of vasculitis, and has remained negative since then.
- cANCA weakly positive
- pANCA negative
- Proteinase-3 1.7 (0-5)
- Myeloperoxidase 1.1 (0-5)
- CRP 5.6 (0-10)
- RPR 4
- Treponema pallidum PCR of rash: negative
- E/LFTs all within normal range
- No macroscopic haematuria (urinalysis not done)
- Chest x-ray normal

INVESTIGATION OF ANAEMIA

- Hb dropped from 112 to 84.
- White blood cells within normal range.
- RBCs: normochromic, normocytic
- Haptoglobin 3.59 (0.3-2.0)
- FOBT not done
- Repeat CT neck/chest/abdo/pelvis booked, but cancelled by the patient.

OUTCOME

- Reviewed urgently by dermatology, and treated with an antihistamine (cetirizine). Received no corticosteroids.
- Acute skin inflammation improved quite rapidly, but post-inflammatory changes remained visible for a few months.
- Anaemia slow to resolve, Hb 90 in October 2014, Hb recovered to 132 in April 2015
- Commenced TDF/FTC/atazanavir/r in October 2014. Well-tolerated and good virologic response.
- Switched to TDF/FTC/darunavir/r in October 2015 to improve management of gastro-oesophageal reflux

LITERATURE REVIEW

A search of medline and pubmed found no other case reports of vasculitis or anaemia occurring in association with dolutegravir or any other integrase inhibitor.

SUMMARY

This is the first case report of vasculitis occurring soon after the commencement of dolutegravir, or any integrase inhibitor. Dolutegravir was started in the setting of a high HIV viral load and recent treatment of several other infections, including syphilis. The vasculitis resolved after cessation of dolutegravir.

Auto-immune markers were weakly positive, and provided no specific diagnosis.

The anaemia was slow to resolve. Possible causes include GI bleeding due to GI vasculitis (but no melaena), or extravascular haemolysis (but normal RBC morphology).

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