

Letters

HAART, THE HEART AND THE POTENTIAL FOR INTERACTION

Editor,

Approximately 103,800 people in the UK are living with human immunodeficiency virus (HIV) as a chronic disease, reflecting the major impact of highly active antiretroviral therapy (HAART). Physicians will be familiar with links between HIV and acute coronary events^{1, 2} but may be less familiar with potential interactions between HAART and cardiovascular medication. We describe a patient living with HIV who underwent primary percutaneous coronary intervention (PPCI) with stent implantation for acute myocardial infarction, along with some important therapeutic considerations that were required to optimise his cardiovascular prognosis.

A 47-year old man presented with acute chest pain for 4 hours and was diagnosed with ST-elevation myocardial infarction. He underwent PPCI with stenting of an acutely occluded proximal left anterior descending coronary artery. An echocardiogram showed impaired left ventricular systolic function with an ejection fraction of 30%. Standard therapy with aspirin and ticagrelor were commenced along with eplerenone, atorvastatin, ramipril and bisoprolol.

The patient was HIV-positive, well controlled on HAART comprising a combination of emtricitabine/tenofovir and efavirenz. Since 1999 the University of Liverpool has maintained a free HIV drug interaction resource which enables healthcare professionals to check HAART against any new medication being initiated. It provides a traffic light system demonstrating the strength of any potential interaction, a summary of the evidence and the specific effect expected. The Table summarises its comments relating to interactions with antiplatelet therapy.

	Clopidogrel	Ticagrelor	Prasugrel
Emtricitabine	Unlikely to affect	Unlikely to affect	Unlikely to affect
Tenofovir	Unlikely to affect	Unlikely to affect	Unlikely to affect
Efavirenz	May diminish efficacy	May diminish efficacy	Unlikely to affect
Etravirine	May diminish efficacy	May diminish efficacy	
Abacavir	May diminish efficacy	Unlikely to affect	Unlikely to affect
Nevirapine	May enhance efficacy	May diminish efficacy	
Darunavir/Ritonavir	Likely to diminish efficacy	Likely to enhance efficacy	Unlikely to affect
Darunavir/Cobicistat	Likely to diminish efficacy	Likely to enhance efficacy	Unlikely to affect
Atazanavir	Likely to diminish efficacy	Likely to enhance efficacy	Unlikely to affect
Fosamprenavir	Likely to diminish efficacy	Likely to enhance efficacy	Unlikely to affect
Indinavir	Likely to diminish efficacy	Likely to enhance efficacy	Unlikely to affect
Lopinavir	Likely to diminish efficacy	Likely to enhance efficacy	Unlikely to affect
Saquinavir	Likely to diminish efficacy	Likely to enhance efficacy	Unlikely to affect
Tipranavir	Likely to diminish efficacy	Likely to enhance efficacy	Unlikely to affect
Dolutegravir	Unlikely to affect	Unlikely to affect	Unlikely to affect

Table. Potentially important effects of antiretroviral drugs on the efficacy of antiplatelet agents³. Those relevant to this patient are highlighted in bold

Because efavirenz could potentially decrease ticagrelor efficacy due to induction of cytochrome P450 3A4, we switched from ticagrelor to prasugrel. Additionally, because of potential interactions between efavirenz, atorvastatin and eplerenone, we switched the latter two to rosuvastatin and spironolactone.

HAART has been a key development in modern medicine, achieving a life expectancy for people living with HIV close to that of the HIV-negative population⁴. Primary PCI is another major advance, but relies on effective dual antiplatelet therapy to prevent stent thrombosis, a highly-lethal early complication⁵.

Clinical teams should be aware of potential overlaps between HAART and cardiovascular medicines, as well as a valuable resource that guides the selection of agents least likely to be compromised by co-prescription with HAART.

Liam Coyle, Niall Herity
Cardiology Department
Belfast HSC Trust
Belfast BT12 6BA
Northern Ireland

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REACTIVE NON-REGIONAL LYMPHADENOPATHY FROM THE COVID-19 mRNA VACCINE: A NOVEL SIDE-EFFECT

Editor,

A 42-year-old South-Asian male presented with multiple new painful lumps in his right groin, 1 week after receiving his 2nd dose of the Pfizer vaccine in the left arm. Systematic questioning did not reveal any history of temperatures, night sweats, or weight loss. There was no history of injury to the right leg or any signs of local infection. There also was no history of genital discharge or ulceration. No past medical history of tuberculosis or family history of cancer was noted. Recent travel history was unremarkable.

On examination two lumps were palpable in the distribution of the vertical chain of inguinal lymph nodes.



These were tender, firm in consistency and had a smooth surface. Systemic examination revealed no significant lymphadenopathy in the other regions. Abdominal and urogenital examination was also unremarkable.

Biochemical investigations revealed normal inflammatory markers including white cell count of $5.49 \text{ cells} \times 10^9 / \text{L}$, C-Reactive protein 0.7 mg/L and ESR 2 mm/hour on 2 consecutive samples thereby making the suspicion of an infectious aetiology like tuberculosis less likely. Lactate dehydrogenase was 180 U/L and full blood count was normal (Haemoglobin 150 g/L , Platelet count $265 \text{ cells} \times 10^9 / \text{L}$) ruling out the possibility of haematological malignancy. Other biochemical tests including urea and electrolytes, liver enzymes, ferritin, vitamin B12 and folate levels, corrected calcium, and alkaline phosphatase levels were all found to be within normal range. An ultrasound scan (USS) confirmed two inguinal lymph nodes (Figure 1 images a, b) with the largest lymph node measuring 3 cm in diameter and described as homogenous with preserved hila in keeping with reactive lymphadenopathy. A follow up USS in 4 weeks revealed a significant reduction in size (6 mm) (Figure 1 images c, d) and their appearance was also reported to be normal. Further clinical follow-up in 3 months revealed absence of any ongoing or new symptoms and complete resolution of inguinal lymphadenopathy.

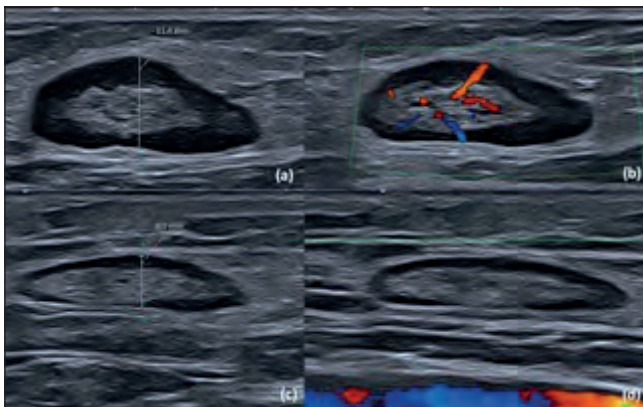


Fig. 1: Grey scale (a) and Colour Doppler (b) ultrasound images of the right groin 10 days after the COVID vaccine demonstrated a mildly enlarged superficial femoral lymph node (vertical group) measuring 11.4 mm in short axis diameter with preserved fatty hilum and minimally increased hilar vascularity, in keeping with a reactive lymphadenitis, corresponding to clinically palpable mildly tender lump.

Follow up grey scale (c) and Colour Doppler (d) ultrasound images of the right groin showed complete regression of the reactive lymphadenitis to normal, appearing right superficial femoral lymph node measuring 6 mm in short axis diameter with negligible vascularity on colour Doppler correlation.

At the time of writing this report non-regional reactive lymphadenopathy had not been reported as a possible transient side-effect to any vaccine^{1, 2, 3}. This is hence the first reported case in literature highlighting this novel side-

effect. The authors acknowledge the absence of a definitive investigation that could confirm direct causation between the vaccine and our case's presentation. However, the absence of any other plausible explanation, the timing of development of the symptoms after the vaccine administration, and complete clinical and radiological resolution of inguinal lymphadenopathy with conservative management supports the hypothesis that this was an adverse reaction to the novel vaccine. Furthermore, the initial radiological appearance of a reactive lymphadenopathy also reinforces our suspicion.

This case emphasizes the importance of obtaining recent immunization history in people presenting with unexplained lymphadenopathy, thereby possibly avoiding the need for further CT imaging and invasive lymph node biopsy tests. There has also been a lot of interest in investigating the migratory function of dendritic immune cells as a cause of local lymphadenopathy following inflammation^{4, 5}. This case also highlights the need for further research to fully understand the pathophysiology of distant site lymph node activation following vaccine administration.

Rithvik Gidwani¹, Salman Siddiqui¹,
Siddhesh Prabhavalkar¹

¹Renal Unit, Altnagelvin Area Hospital,
Glenshane Road, Londonderry BT47 6SB

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ALLERGIC CONTACT DERMATITIS TO A COMMON TOPICAL ACNE TREATMENT – AN UNFAMILIAR MIMIC OF ANGIOEDEMA.

Editor,

A previously healthy, non-atopic 12-year-old girl presented to the Emergency Department with a pruritic, facial skin eruption. Examination revealed localised facial swelling, tenderness and erythema limited to periorbital, malar, and nasal areas (Figure 1). The patient was commenced on intravenous antibiotics and admitted for inpatient observation.

Concern was heightened six hours later, with urgent review demonstrating rapid progression in symptom severity.