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Autoimmune haemolytic anaemia, a delayed haematological complication of Adalimumab therapy

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Dear Editor,

We wish to highlight a recent case of a patient who attends our Dermatology department who developed Autoimmune haemolytic anaemia (AIHA) secondary to treatment with Adalimumab for chronic plaque psoriasis.

Our patient is a 68 year old female who presented to the emergency department with a three month history of worsening fatigue and exertional shortness of breath, with no recent history of infection nor change in medications. Past medical history included chronic plaque psoriasis, psoriatic arthritis and seronegative spondyloarthropathy. She was initiated on fortnightly Adalimumab four years prior to presentation for the management of psoriasis, with excellent therapeutic response.

On presentation to the Emergency Department she was afebrile and clinically stable with a normal respiratory rate and saturating at 99% on room air with no palpable hepatosplenomegaly nor lymphadenopathy.

Laboratory results on admission revealed a low haemoglobin level (57 g/L), elevated serum bilirubin (41umol/L) and a raised lactate dehydrogenase (389 IU/L). Absolute Reticulocyte count was raised (438.6 10^9/L) with low serum haptoglobin levels (0.1g/L). Direct and indirect antiglobulin tests were positive. Antinuclear antibody, rheumatoid factor and cold agglutinins were negative. After consultation with the Haematology team, Autoimmune haemolytic anaemia (AIHA) secondary to Adalimumab was diagnosed.

The patient was admitted to hospital as a short term measure and Adalimumab was discontinued. Treatment with blood transfusions and a tapering dose of prednisolone 1mg/kg/day was commenced with omeprazole and folic acid. At present, she is responding to treatment with prednisolone with improvement in symptoms and blood parameters.

Adalimumab, an anti-Tumour Necrosis factor (Anti-TNF) agent, is licensed for use in the treatment of chronic plaque psoriasis. Anti-TNF agents can induce autoimmune phenomena including vasculitis, systemic lupus erythematosus and paradoxically, psoriasis[1]. Haematological complications of anti-TNF agents are rare[2.] Thrombocytopenia and neutropaenia have been reported with reports suggesting an exposure time ranging from 1

to 67 weeks and 2 to 56 weeks, respectively[2]. Our patient presented with a four year latency period between initiation of Adalimumab and symptoms developing.

Drug induced haemolytic anaemia is rare, with the most common culprits being antibiotics (cephalosporins), NSAID's, diuretics, antihypertensives and anti-neoplastic agents[3]. Patients can present within hours of exposure to the culprit drug with severe complement mediated intravascular haemolysis[4]. Delayed-onset drug-induced AIHA cases have been reported from 24 to 60 months after administration of drug [4].

To date, there is only one other case report of AIHA developing three years post initiation of Adalimumab treatment for psoriasis. We add this case to the literature on this topic to raise awareness of this rare, but serious, complication of Adalimumab.

Declarations of Conflicts of Interest:
None declared.

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