Results: A full-body CT scan demonstrated the presence of multifocal lymphadenopathy, alveolar infiltrates suggestive of diffuse alveolar haemorrhage, and haemorrhage in both kidneys and the left adrenal gland; anticoagulation was held, despite the INR being within the patient's baseline therapeutic levels. He was admitted with a working diagnosis of CAPS and possible zoster infection. Appropriate immunologic workup was requested. He was prescribed intravenous acyclovir, antibiotics, pulse dose of glucocorticoids, and IVIG. Bronchoscopy with bronchoalveolar lavage revealed the presence of haemosiderin-laden macrophages. The rash regressed, and the patients' condition improved. He was discharged with glucocorticoid tapering regimen, hydroxychloroquine, aspirin and warfarin.

Antibody titers were taken prior to IVIG administration at presentation, and at 4 weeks. High VZV IgG titers found at presentation regressed over four times on follow-up. Furthermore, at 4 weeks the patient had developed IgM antibodies against both VZV and HSV. These findings confirmed a concurrent infection.

Conclusion: This is the first report of coexisting HSV/VZV infection associated with CAPS. A literature review identified a total of 28 patients with coexisting HSV/VZV infection, whereas only one case of CAPS triggered by HSV was identified¹. This case illustrates that concurrent infection can occur in the absence of immunosuppressive therapy in patients with APS, serving as a trigger for hemorrhagic CAPS. Simultaneous treatment with antiviral against herpesviruses, glucocorticoids and IVIG may mitigate the inflammatory cascade associated with CAPS.

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AB0648

REACTIVE ARTHRITIS IN SYPHILIS MIMICKING RHEUMATOID ARTHRITIS: A CASE REPORT

S. M. Lao¹, J. Patel². ¹Mount Sinai West, Internal Medicine, New York, United States of America; ²Mount Sinai West, Rheumatology, New York, United States of America

Background: Reactive arthritis is a form of spondyloarthritis with aseptic joint involvement occurring after a gastrointestinal or urogenital infection. Most commonly associated with *Chlamydia trachomatis*, *Salmonella*, *Shigella*, *Campylobacter*, and *Yersinia*. Syphilis is an infection caused by the spirochete *Treponema pallidum* and is not usually associated with reactive arthritis. Syphilis is a great imitator of other diseases due to its broad presentation including painless chancre, constitutional symptoms, adenopathy, rash, synovitis, neurological and ocular findings.

Objectives: To discuss a patient who presented with symptoms of rheumatoid arthritis (RA) but was later diagnosed with syphilis.

Methods: 31 year old male, former tobacco smoker, referred to Rheumatology for sudden onset joint pains, elevated anti-cyclic citrullinated peptide (anti-CCP), and elevated inflammatory markers. He reported pain in bilateral wrists, fingers, and right elbow for 6 weeks. Associated with 45 minutes of morning stiffness and new onset lower back pain without stiffness. He denied trauma, fever, chills, skin rash, dysuria, or diarrhea. Initiated trial naproxen 500mg twice a day only to have minimal relief. Patient is sexually active with men and was recently diagnosed with oropharyngeal gonorrhea treated with azithromycin 4 months prior. All other STI screening including syphilis, gonorrhea, HIV were negative at that time. Patient is on emtricitabine and tenofovir disoproxil fumarate for HIV pre-exposure prophylaxis. He denied family history of immune mediated conditions. Exam was significant for mild synovitis of both wrists and bilateral 2nd metacarpophalangeal joints. Initial labs revealed weakly positive anti-CCP 21 (normal <20), sedimentation rate 64 (normal ESR 0-15 mm/hr), C-reactive protein 24 (normal CRP 0-10 mg/L), and negative RF, ANA, HLA B27. During a short trial of prednisone taper, there was temporary improvement in symptoms, however synovitis recurred upon completion. Hydroxychloroquine (HCQ) 200mg twice a day was started for possible RA and he was referred to Ophthalmology for baseline retinopathy screening. Incidentally, he developed right sided blurry vision 2 weeks after initiation of HCQ. He was diagnosed with panuveitis of the right eye with inflammation of the optic nerve head and prednisone 40mg daily was initiated for presumed ocular manifestation of RA. However, further workup of panuveitis revealed reactive *Treponema pallidum* antibody and RPR quantity 1:32. Prednisone was immediately discontinued and he was referred to the emergency department for possible neurosyphilis.

Results: Lumbar puncture showed cerebral spinal fluid with 260 red blood cells, 1 white blood cell, 27mg/dL protein, 60mg/dL glucose, non reactive VDRL, reactive pallidum IgG antibody, and negative cultures. Meningitis and encephalitis

panels were negative. Patient completed a 14 day course of IV penicillin G with complete remission of joint pain, visual symptoms, and normalization of anti-CCP, ESR, and CRP.

Conclusion: This case highlights how syphilis may mimic signs and symptoms of RA including symmetrical small joint pain, morning stiffness, elevated inflammatory markers, and positive anti-CCP. Anti-CCP is >96% specific for RA but was a false positive in this patient. There have only been few reported cases noting positive anti-CCP with reactive arthritis. This is a rare case of reactive arthritis secondary to syphilis with resolution of symptoms upon treating the syphilis.

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AB0649

INFECTION PROFILE OF IMMUNE-MODULATORY DRUGS USED IN AUTOIMMUNE DISEASES: ANALYSIS OF SUMMARY OF PRODUCT CHARACTERISTIC DATA

M. Dey^{1,2}, K. Bechman³, C. Smith⁴, A. Cope³, E. Nikiphorou³, J. Galloway³.

¹University of Liverpool, Institute of Life Course and Medical Sciences, Liverpool, United Kingdom; ²Aintree University Hospital, Liverpool University Hospitals NHS Foundation Trust, Department of Rheumatology, Liverpool, United Kingdom; ³King's College London, Centre for Rheumatic Disease, Weston Education Centre, London, United Kingdom; ⁴King's College London, St John's Institute of Dermatology, London, United Kingdom

Background: The number of immune-modulatory drugs used to treat immune-mediated inflammatory diseases (IMiDs) has exponentially increased in recent decades. While effective in controlling disease, serious infection remains a concern.

Accurate information on immune-modulatory drugs, including infections, is required to guide prescribing decisions. The "summary of product characteristics" (SmPC) by the European Medicines Agency (EMA) provides a useful repository of information on adverse events e.g. infections, from clinical trials and post-marketing pharmacovigilance (1).

To date, no comparison has been undertaken on reported infection frequencies across SmPCs for immune-modulators.

Objectives: To compare infection frequency, site and type across the most commonly-prescribed immune-modulatory drugs used to treat IMiDs, using information provided by SmPCs.

Methods: A drug was included if licensed in Europe for treatment of one of the following: rheumatoid arthritis, axial spondyloarthritis, connective tissue disease, autoimmune vasculitis, autoinflammatory syndromes, inflammatory bowel disease (Crohn's and ulcerative colitis), psoriasis, multiple sclerosis and other rarer conditions.

The Electronic Medicines Compendium (EMC) was searched for commonly prescribed immune-modulatory drugs used for the above indications. SmPC documents were manually searched for information on infection frequency, extracted from sections 4.4 and 4.8. Infection frequency was recorded as per convention in the SmPC: very common ($\geq 1/10$); common ($\geq 1/100$ to $< 1/10$); uncommon ($\geq 1/1,000$ to $< 1/100$); rare ($\geq 1/10,000$ to $< 1/1,000$); very rare ($< 1/10,000$) (1), for each drug. Information was further extracted on infection site (e.g. respiratory, skin etc), type (e.g. bacterial, viral etc) and individual pathogenic organisms.

25% of included SmPCs were screened and extracted by a second reviewer. Disagreements were resolved with input from a third reviewer.

Results: In total, 39 drugs were included, used across 20 indications: nine conventional synthetic disease-modifying anti-rheumatic drugs (csDMARDs), six targeted synthetic DMARDs (tsDMARDs; four Janus kinase [JAK] inhibitors, two sphingosine 1-phosphate receptor modulators) and 24 biologic DMARDs (17 cytokine-targeted; seven cell-targeted).

Twelve sites of infection were recorded. Minimal or no site information was available for most csDMARDs and siponimod, certolizumab pegol and rituximab. The most common sites of infection are listed by drug group in Figure 1. Upper respiratory tract was the most common site, especially with bDMARDs. Lower respiratory, ear/nose/throat (including sinusitis) and urinary tract infections were moderately common, with clustering within drug groups. No drugs reported risk of cardiac infections; the eye, musculoskeletal, neurological, oral and reproductive sites were the least commonly-reported sites of infection.

Infection data for 27 distinct pathogens were recorded, the majority viruses, especially with bDMARD use. Herpes simplex and zoster were the most frequently